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 35 40 45
 Ser Arg Leu Gly Trp Arg Leu Asp Leu Pro Trp Ser Gly Arg Ser Gly
 50 55 60
 Leu Thr Arg Ser Pro Ala Pro Gly Leu Cys Pro Ile Tyr Lys Pro Pro
 65 70 75 80
 Glu Thr Arg Pro Ala Lys Trp Asn Arg Thr Val Arg Thr Cys Cys Pro
 85 90 95
 Gly Trp Gly Gly Ala His Cys Thr Glu Ala Leu Ala Lys Ala Ser Pro
 100 105 110
 Glu Gly His Cys Phe Ala Met Trp Gln Cys Gln Leu Gln Ala Gly Ser
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 Ala Asn Ala Ser Ala Gly Ser Leu Glu Glu Cys Cys Ala Arg Pro Trp
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 Gly Arg Ser Trp Trp Asp Gly Ser Ser Gln Ala Cys Arg Ser Cys Ser
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 Ser Arg His Leu Pro Gly Ser Ala Ser Ser Pro Ala Leu Leu Gln Pro
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 Gln Pro Gly His Cys Gln Arg Val Gln Val Thr Met Gly Pro Glu Glu
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 Val Leu Ile Gln Ala Gly Asn Val Ser Val Lys Gly Gln Leu Val Pro
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 Pro Cys Gln Pro Gly Cys Gly Cys Pro Gly Gly Gln His Ser Leu Pro
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 4165 4170 4175
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 Gln Glu Gly Leu Pro Pro Glu Arg Gln Ala Ser Gly Pro Gly Ile Ala
 65 70 75 80
 Ala Ala Ala Ala Ala Glu Leu Gln Leu Gly Ala Glu Gly Lys Glu Ala
 85 90 95
 Ser Arg Glu Arg Glu Ala Arg Glu Ser Ser Ala Gly Pro Arg Ala Gln
 100 105 110
 Ser Pro Ala Ala Pro Arg Pro Arg Arg Pro Gly Pro Asn Ala Ala Gly
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 130 135 140

Asp Pro Glu Leu Gln Pro Ala Glu Arg Pro Leu Pro Ser Pro Gly Ser
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 Gly Glu Gly Ala Pro Val Phe Leu Thr Gly Pro Arg Ser Gln Trp Val
 165 170 175
 Leu Arg Gly Ala Glu Val Val Leu Thr Cys Arg Ala Gly Gly Leu Pro
 180 185 190
 Glu Pro Thr Leu Tyr Trp Glu Lys Asp Gly Met Ala Leu Asp Glu Val
 195 200 205
 Trp Asp Ser Ser His Phe Ala Leu Gln Pro Gly Arg Ala Glu Asp Gly
 210 215 220
 Pro Gly Ala Ser Leu Ala Leu Arg Ile Leu Ala Ala Arg Leu Pro Asp
 225 230 235 240
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 <213> Homo sapiens

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<212> PRT
<213> Homo sapiens

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Leu  His  Thr  Cys  Lys  Lys  Phe  Gln  Lys  Arg  Asp  Gly  Arg  Lys  Val  Arg
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Lys  Ala  Ala  Lys  Asn  Glu  Ile  Gly  Ile  Leu  Lys  Met  Val  Lys  His  Pro
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Val  Leu  Glu  Ala  Val  Ala  Tyr  Leu  His  Ser  Leu  Lys  Ile  Val  His  Arg
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Asn  Leu  Lys  Leu  Glu  Asn  Leu  Val  Tyr  Tyr  Asn  Arg  Leu  Lys  Asn  Ser
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<213> Homo sapiens

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<211> 1856

<212> PRT

<213> Homo sapiens

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<212> PRT

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Glu Val Tyr Ala Tyr Glu Ile Asp Cys Gly Pro Gly Thr Trp Leu Thr 1075	1080	1085
Pro Phe Leu Gln Ala Val Tyr Leu Phe Val Gln Tyr Ile Ile Met Val 1090	1095	1100
Asn Leu Leu Ile Ala Phe Phe Lys Ser Asn Val Tyr Leu Gln Val Lys 1105	1110	1115 1120
Ala Ile Ser Asn Ile Val Trp Lys Tyr Gln Arg Tyr His Phe Ile Met 1125	1130	1135
Ala Tyr His Glu Lys Pro Val Leu Pro Pro Pro Leu Ile Ile Leu Ser 1140	1145	1150
His Ile Val Ser Leu Phe Cys Cys Ile Cys Lys Arg Arg Lys Lys Asp 1155	1160	1165
Lys Thr Ser Asp Gly Pro Ser Lys Ile Glu Leu Phe Leu Thr Glu Glu 1170	1175	1180
Asp Gln Lys Lys Leu His Asp Phe Glu Glu Gln Cys Val Glu Met Tyr 1185	1190	1195 1200
Phe Asn Glu Lys Asp Asp Lys Phe His Ser Gly Ser Glu Glu Arg Ile 1205	1210	1215
Arg Val Thr Phe Glu Arg Val Glu Gln Lys Pro Ile Gln Ile Lys Glu		

1220	1225	1230
Val Gly Asp Arg Val Asn Tyr Ile Lys Arg Ser Leu Gln Ser Leu Asp 1235 1240 1245		
Ser Gln Ile Gly His Leu Gln Asp Leu Ser Ala Leu Thr Val Asp Thr 1250 1255 1260		
Leu Lys Thr Leu Thr Ala Gln Lys Ala Ser Glu Ala Ser Lys Val His 1265 1270 1275 1280		
Asn Glu Ile Thr Arg Glu Leu Ser Ile Ser Lys His Leu Ala Gln Asn 1285 1290 1295		
Leu Ile Asp Asp Gly Pro Val Arg Pro Ser Val Trp Lys Lys His Gly 1300 1305 1310		
Val Val Asn Thr Leu Ser Ser Ser Leu Pro Gln Gly Asp Leu Glu Ser 1315 1320 1325		
Asn Asn Pro Phe His Cys Asn Ile Leu Met Lys Asp Asp Lys Asp Pro 1330 1335 1340		
Gln Cys Asn Ile Phe Gly Gln Asp Leu Pro Ala Val Pro Gln Arg Lys 1345 1350 1355 1360		
Glu Phe Asn Phe Pro Glu Ala Gly Ser Ser Ser Gly Ala Leu Phe Pro 1365 1370 1375		
Ser Ala Val Ser Pro Pro Glu Leu Arg Gln Arg Leu His Gly Val Glu 1380 1385 1390		
Leu Leu Lys Ile Phe Asn Lys Asn Gln Lys Leu Gly Ser Ser Ser Thr 1395 1400 1405		
Ser Ile Pro His Leu Ser Ser Pro Pro Thr Lys Phe Phe Val Ser Thr 1410 1415 1420		
Pro Ser Gln Pro Ser Cys Lys Ser His Leu Glu Thr Gly Thr Lys Asp 1425 1430 1435 1440		
Gln Glu Thr Val Cys Ser Lys Ala Thr Glu Gly Asp Asn Thr Glu Phe 1445 1450 1455		
Gly Ala Phe Val Gly His Arg Asp Ser Met Asp Leu Gln Arg Phe Lys 1460 1465 1470		
Glu Thr Ser Asn Lys Ile Lys Leu Gln Asn Asn Asn Thr Ser Glu Asn 1475 1480 1485		
Thr Leu Lys Arg Val Ser Ser Leu Ala Gly Phe Thr Asp Cys His Arg 1490 1495 1500		
Thr Ser Ile Pro Val His Ser Lys Gln Ala Glu Lys Ile Ser Arg Arg 1505 1510 1515 1520		
Pro Ser Thr Glu Asp Thr His Glu Val Asp Ser Lys Ala Ala Leu Ile		

1525	1530	1535
Pro Asp Trp Leu Gln Asp Arg Pro Ser Asn Arg Glu Met Gly Leu Thr 1540	1545	1550
Ser Pro Phe Lys Pro Ala Met Asp Thr Asn Tyr Tyr Tyr Ser Ala Val 1555	1560	1565
Glu Arg Asn Asn Leu Met Arg Leu Ser Gln Ser Ile Pro Phe Thr Pro 1570	1575	1580
Val Pro Pro Arg Gly Glu Pro Val Thr Val Tyr Arg Leu Glu Glu Ser 1585	1590	1595 1600
Ser Pro Asn Ile Leu Asn Asn Ser Met Ser Ser Trp Ser Gln Leu Gly 1605	1610	1615
Leu Cys Ala Lys Ile Glu Phe Leu Ser Lys Glu Glu Met Gly Gly Gly 1620	1625	1630
Leu Arg Arg Ala Val Lys Val Gln Cys Thr Trp Ser Glu His Asp Ile 1635	1640	1645
Leu Lys Ser Gly His Leu Tyr Ile Ile Lys Ser Phe Leu Pro Glu Val 1650	1655	1660
Val Asn Thr Trp Ser Ser Ile Tyr Lys Glu Asp Thr Val Leu His Leu 1665	1670	1675 1680
Cys Leu Arg Glu Ile Gln Gln Gln Arg Ala Ala Gln Lys Leu Thr Phe 1685	1690	1695
Ala Phe Asn Gln Met Lys Pro Lys Ser Ile Pro Tyr Ser Pro Gly Glu 1700	1705	1710
Leu Leu Val Leu Asp Leu Gln Gly Val Gly Glu Asn Leu Thr Asp Pro 1715	1720	1725
Ser Val Ile Lys Ala Glu Glu Lys Arg Ser Cys Asp Met Val Phe Gly 1730	1735	1740
Pro Ala Asn Leu Gly Glu Asp Ala Ile Lys Asn Phe Arg Ala Lys His 1745	1750	1755 1760
His Cys Asn Ser Cys Cys Arg Lys Leu Lys Leu Pro Asp Leu Lys Arg 1765	1770	1775
Asn Asp Tyr Thr Pro Asp Lys Ile Ile Phe Pro Gln Asp Glu Pro Ser 1780	1785	1790
Asp Leu Asn Leu Gln Pro Gly Asn Ser Thr Lys Glu Ser Glu Ser Thr 1795	1800	1805
Asn Ser Val Arg Leu Met Leu 1810	1815	

<210> 11
 <211> 1869
 <212> DNA
 <213> Homo sapiens

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 cagcaatgac ccctggggcc cccctagttc gctcatgtcc gagatcgctg acctgacctt 180
 caacacagtg gccttcaccg aagtcattgg catgctgtgg cggcggtca atgacagcgg 240
 caagaactgg cggcacgtgt acaaggctct aacattgctg gactacctgc tcaagacggg 300
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 caagaccaag gagcgcatgg cactggaggg catcgccccg ctggtgctgg gcttcagccg 540
 ccgctacggc gaggactaca gccgctcccc gggctccccg tcctctaca actcctcctc 600
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<210> 12
 <211> 604
 <212> PRT
 <213> Homo sapiens

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 Tyr Ser Glu Ala Glu Ile Lys Val Arg Glu Ala Thr Ser Asn Asp Pro
 20 25 30
 Trp Gly Pro Pro Ser Ser Leu Met Ser Glu Ile Ala Asp Leu Thr Phe
 35 40 45
 Asn Thr Val Ala Phe Thr Glu Val Met Gly Met Leu Trp Arg Arg Leu
 50 55 60

Asn	Asp	Ser	Gly	Lys	Asn	Trp	Arg	His	Val	Tyr	Lys	Ala	Leu	Thr	Leu	65	70	75	80
Leu	Asp	Tyr	Leu	Leu	Lys	Thr	Gly	Ser	Glu	Arg	Val	Ala	His	Gln	Cys	85	90	95	
Arg	Glu	Asn	Leu	Tyr	Thr	Ile	Gln	Thr	Leu	Lys	Asp	Phe	Gln	Tyr	Ile	100	105	110	
Asp	Arg	Asp	Gly	Lys	Asp	Gln	Gly	Val	Asn	Val	Arg	Glu	Lys	Val	Lys	115	120	125	
Gln	Val	Met	Ala	Leu	Leu	Lys	Asp	Glu	Glu	Arg	Leu	Arg	Gln	Glu	Arg	130	135	140	
Thr	His	Ala	Leu	Lys	Thr	Lys	Glu	Arg	Met	Ala	Leu	Glu	Gly	Ile	Gly	145	150	155	160
Pro	Leu	Val	Leu	Gly	Phe	Ser	Arg	Arg	Tyr	Gly	Glu	Asp	Tyr	Ser	Arg	165	170	175	
Ser	Arg	Gly	Ser	Pro	Ser	Ser	Tyr	Asn	Ser	Ser	Ser	Ser	Ser	Pro	Arg	180	185	190	
Tyr	Thr	Ser	Asp	Leu	Glu	Gln	Ala	Arg	Pro	Gln	Thr	Ser	Gly	Glu	Glu	195	200	205	
Glu	Leu	Gln	Leu	Gln	Leu	Ala	Leu	Ala	Met	Ser	Arg	Glu	Glu	Ala	Glu	210	215	220	
Lys	Glu	Val	Arg	Ser	Trp	Gln	Gly	Asp	Gly	Ser	Pro	Met	Ala	Asn	Gly	225	230	235	240
Ala	Gly	Ala	Val	Val	His	His	Gln	Arg	Asp	Arg	Glu	Pro	Glu	Arg	Glu	245	250	255	
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Asp	Leu	Ala	Asp	Ile	Phe	Val	Pro	Ala	Leu	Ala	Pro	Pro	Ser	Thr	His	275	280	285	
Cys	Ser	Ala	Asp	Pro	Trp	Asp	Ile	Pro	Gly	Phe	Arg	Pro	Asn	Thr	Glu	290	295	300	
Ala	Ser	Gly	Ser	Ser	Trp	Gly	Pro	Ser	Ala	Asp	Pro	Trp	Ser	Pro	Ile	305	310	315	320
Pro	Ser	Gly	Thr	Val	Leu	Ser	Arg	Ser	Gln	Pro	Trp	Asp	Leu	Thr	Pro	325	330	335	
Met	Leu	Ser	Ser	Ser	Glu	Pro	Trp	Gly	Arg	Thr	Pro	Val	Leu	Pro	Ala	340	345	350	
Gly	Pro	Pro	Thr	Thr	Asp	Pro	Trp	Ala	Leu	Asn	Ser	Pro	His	His	Lys	355	360	365	

Leu Pro Ser Thr Gly Ala Asp Pro Trp Gly Ala Ser Leu Glu Thr Ser
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 Asp Thr Pro Gly Gly Ala Ser Thr Phe Asp Pro Phe Ala Lys Pro Pro
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 Glu Ser Thr Glu Thr Lys Glu Gly Leu Glu Gln Ala Leu Pro Ser Gly
 405 410 415
 Lys Pro Ser Ser Ser Gly Glu Leu Asp Leu Phe Gly Asp Pro Ser Pro
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 Ser Ser Lys Gln Asn Gly Thr Lys Glu Pro Asp Ala Leu Asp Leu Gly
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 515 520 525
 Pro Ala Leu Gly Leu Ala Gly Gly Pro Val Gly Ala Pro Leu Gly Ser
 530 535 540
 Met Thr Tyr Ser Ala Ser Leu Pro Leu Pro Leu Ser Ser Val Pro Ala
 545 550 555 560
 Gly Leu Thr Leu Pro Ala Ser Val Ser Val Phe Pro Gln Ala Gly Ala
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<211> 2646

<212> DNA

<213> Homo sapiens

<400> 13

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<210> 14

<211> 881

<212> PRT

<213> Homo sapiens

<400> 14

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Phe Ser Ser Ala Phe Ser Ser Asp Ser Lys Ser Ser Ser Gln Gly Leu
35 40 45

Gly	Val	Glu	Val	Pro	Ser	Ile	Lys	Pro	Pro	Ser	Trp	Lys	Val	Pro	Asp	50	55	60
Gln	Phe	Leu	Asp	Ser	Lys	Ala	Ser	Ala	Gly	Ile	Ser	Asp	Ser	Ser	Trp	65	70	75
Phe	Pro	Glu	Ala	Leu	Ser	Ser	Asn	Met	Ser	Gly	Ser	Phe	Trp	Ser	Asn	85	90	95
Val	Ser	Ala	Glu	Gly	Gln	Asp	Leu	Ser	Pro	Val	Ser	Pro	Phe	Ser	Glu	100	105	110
Thr	Pro	Gly	Ser	Glu	Val	Phe	Pro	Asp	Ile	Ser	Asp	Pro	Gln	Val	Pro	115	120	125
Ala	Lys	Asp	Pro	Lys	Pro	Ser	Phe	Thr	Val	Lys	Thr	Pro	Ala	Ser	Asn	130	135	140
Ile	Ser	Thr	Gln	Val	Ser	His	Thr	Lys	Leu	Ser	Val	Glu	Ala	Pro	Asp	145	150	155
Ser	Lys	Phe	Ser	Pro	Asp	Asp	Met	Asp	Leu	Lys	Leu	Ser	Ala	Gln	Ser	165	170	175
Pro	Glu	Ser	Lys	Phe	Ser	Ala	Glu	Thr	His	Ser	Ala	Ala	Ser	Phe	Pro	180	185	190
Gln	Gln	Val	Gly	Gly	Pro	Leu	Ala	Val	Leu	Val	Gly	Thr	Thr	Ile	Arg	195	200	205
Leu	Pro	Leu	Val	Pro	Ile	Pro	Asn	Pro	Gly	Pro	Pro	Thr	Ser	Leu	Val	210	215	220
Val	Trp	Arg	Arg	Gly	Ser	Lys	Val	Leu	Ala	Ala	Gly	Gly	Leu	Gly	Pro	225	230	235
Gly	Ala	Pro	Leu	Ile	Ser	Leu	Asp	Pro	Ala	His	Arg	Asp	His	Leu	Arg	245	250	255
Phe	Asp	Gln	Ala	Arg	Gly	Val	Leu	Glu	Leu	Ala	Ser	Ala	Gln	Leu	Asp	260	265	270
Asp	Ala	Gly	Val	Tyr	Thr	Ala	Glu	Val	Ile	Arg	Ala	Gly	Val	Ser	Gln	275	280	285
Gln	Thr	His	Glu	Phe	Thr	Val	Gly	Val	Tyr	Glu	Pro	Leu	Pro	Gln	Leu	290	295	300
Ser	Val	Gln	Pro	Lys	Ala	Pro	Glu	Thr	Glu	Glu	Gly	Ala	Ala	Glu	Leu	305	310	315
Arg	Leu	Arg	Cys	Leu	Gly	Trp	Gly	Pro	Gly	Arg	Gly	Glu	Leu	Ser	Trp	325	330	335
Ser	Arg	Asp	Gly	Arg	Ala	Leu	Glu	Ala	Ala	Glu	Ser	Glu	Gly	Ala	Glu	340	345	350

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 Val Arg Ser Asp His Ala Arg Tyr Thr Cys Arg Val Arg Ser Pro Phe
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 Gly His Arg Glu Ala Ala Ala Asp Val Ser Val Phe Tyr Gly Pro Asp
 385 390 395 400
 Pro Pro Thr Ile Thr Val Ser Ser Asp Arg Asp Ala Ala Pro Ala Arg
 405 410 415
 Phe Val Thr Ala Gly Ser Asn Val Thr Leu Arg Cys Ala Ala Ala Ser
 420 425 430
 Arg Pro Pro Ala Asp Ile Thr Trp Ser Leu Ala Asp Pro Ala Glu Ala
 435 440 445
 Ala Val Pro Ala Gly Ser Arg Leu Leu Leu Pro Ala Val Gly Pro Gly
 450 455 460
 His Ala Gly Thr Tyr Ala Cys Leu Ala Ala Asn Pro Arg Thr Gly Arg
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 Arg Arg Arg Ser Leu Leu Asn Leu Thr Val Ala Asp Leu Pro Pro Gly
 485 490 495
 Ala Pro Gln Cys Ser Val Glu Gly Gly Pro Gly Asp Arg Ser Leu Arg
 500 505 510
 Phe Arg Cys Ser Trp Pro Gly Gly Ala Pro Ala Ala Ser Leu Gln Phe
 515 520 525
 Gln Gly Leu Pro Glu Gly Ile Arg Ala Gly Pro Val Ser Ser Val Leu
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 545 550 555 560
 Cys Leu Ala Arg His Leu Val Ala Thr Arg Thr Cys Thr Val Thr Pro
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 Glu Ala Pro Arg Glu Val Leu Leu His Pro Leu Val Ala Glu Thr Arg
 580 585 590
 Leu Gly Glu Ala Glu Val Ala Leu Glu Ala Ser Gly Cys Pro Pro Pro
 595 600 605
 Ser Arg Ala Ser Trp Ala Arg Glu Gly Arg Pro Leu Ala Pro Gly Gly
 610 615 620
 Gly Ser Arg Leu Arg Leu Ser Gln Asp Gly Arg Lys Leu His Ile Gly
 625 630 635 640
 Asn Phe Ser Leu Asp Trp Asp Leu Gly Asn Tyr Ser Val Leu Cys Ser
 645 650 655

Gly Ala Leu Gly Ala Gly Gly Asp Gln Ile Thr Leu Ile Gly Pro Ser
 660 665 670
 Ile Ser Ser Trp Arg Leu Gln Arg Ala Arg Asp Ala Ala Val Leu Thr
 675 680 685
 Trp Asp Val Glu Arg Gly Ala Leu Ile Ser Ser Phe Glu Ile Gln Ala
 690 695 700
 Trp Pro Asp Gly Pro Ala Leu Gly Arg Thr Ser Thr Tyr Arg Asp Trp
 705 710 715 720
 Val Ser Leu Leu Ile Leu Gly Pro Gln Glu Arg Ser Ala Val Val Pro
 725 730 735
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 740 745 750
 Leu Gly Gly Gln Pro Gly Thr Pro Ser Gln Ser Arg Val Tyr Arg Ala
 755 760 765
 Gly Pro Thr Leu Ser His Gly Ala Ile Ala Gly Ile Val Leu Gly Ser
 770 775 780
 Leu Leu Gly Leu Ala Leu Leu Ala Val Leu Leu Leu Leu Cys Ile Cys
 785 790 795 800
 Cys Leu Cys Arg Phe Arg Gly Lys Thr Pro Glu Lys Lys Lys His Pro
 805 810 815
 Ser Thr Leu Val Pro Val Val Thr Pro Ser Glu Lys Lys Met His Ser
 820 825 830
 Val Thr Pro Val Glu Ile Ser Trp Pro Leu Asp Leu Lys Val Pro Leu
 835 840 845
 Glu Asp His Ser Ser Thr Arg Ala Tyr Gln Lys Lys Ser Leu Pro Val
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<210> 15

<211> 8589

<212> DNA

<213> Homo sapiens

<400> 15

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Gln Arg Gln Val Leu Arg Glu Ala Pro Gly Phe Val Thr Asp Gly Ala
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Gly Asn Tyr Ser Val Asn Gly Asn Cys Glu Trp Leu Ile Glu Ala Pro
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Ser Pro Gln His Arg Ile Leu Leu Asp Phe Leu Phe Leu Asp Thr Glu
          65                      70                      75                      80

Cys Thr Tyr Asp Tyr Leu Phe Val Tyr Asp Gly Asp Ser Pro Arg Gly
          85                      90                      95

Pro Leu Leu Ala Ser Leu Ser Gly Ser Thr Arg Pro Pro Pro Ile Glu
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Ala Ser Ser Gly Lys Met Leu Leu His Leu Phe Ser Asp Ala Asn Tyr
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 Cys Glu Pro Gly Phe Leu Gly Arg Ala Cys Asp Leu His Leu Trp Glu
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Met Asn Ile His Ser Ile Val Val Gln Val Gln Cys Ile Asn Lys Lys
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Val Gly Thr Ile Ile Tyr His Glu Val Arg Ile Val Val Arg Asp Arg
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Leu	Asn	Leu	Gln	Ala	Thr	Asp	Arg	Glu	Gly	Asp	Ser	Ile	Thr	Tyr	Ala	645	650	655
Ile	Glu	Asn	Gly	Asp	Pro	Gln	Arg	Val	Phe	Asn	Leu	Ser	Glu	Thr	Thr	660	665	670
Gly	Ile	Leu	Thr	Leu	Gly	Lys	Ala	Leu	Asp	Arg	Glu	Ser	Thr	Asp	Arg	675	680	685
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Thr	Ala	Thr	Val	Asn	Ile	Met	Val	Thr	Asp	Val	Asn	Asp	Asn	Ala	Pro	705	710	715
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Ala	Asn	Ala	Phe	Val	Gly	Gln	Val	Lys	Ala	Thr	Asp	Pro	Asp	Ala	Gly	740	745	750
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Arg	Ile	Thr	Ser	Asn	Gly	Ser	Ile	Tyr	Thr	Ala	Val	Lys	Leu	Asn	Arg	770	775	780
Glu	Val	Arg	Asp	Tyr	Tyr	Glu	Leu	Val	Val	Val	Ala	Thr	Asp	Gly	Ala	785	790	795
Val	His	Pro	Arg	His	Ser	Thr	Leu	Thr	Leu	Ala	Ile	Lys	Val	Leu	Asp	805	810	815
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Lys	Asp	Val	Asp	Leu	Gly	Ala	Asn	Val	Ser	Tyr	Arg	Ile	Arg	Ser	Pro	850	855	860
Glu	Val	Lys	His	Phe	Phe	Ala	Leu	His	Pro	Phe	Thr	Gly	Glu	Leu	Ser	865	870	875
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Met Leu Phe Leu Asn Ser Thr Gly Arg Val Leu Asp Arg Asp Pro Pro
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Met Asn Ile His Ser Ile Val Val Gln Val Gln Cys Ile Asn Lys Lys

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Pro Pro Thr Phe Phe Pro Leu Ser Val Ser Thr Ser Gly Pro Pro Thr 1810	1815	1820
Pro Pro Leu Leu Pro Pro Phe Pro Thr Pro Leu Pro Pro Pro Pro 1825	1830	1835 1840
Ser Ile Pro Cys Pro Pro Pro Pro Ser Ala Ser Phe Leu Ser Thr Glu 1845	1850	1855
Cys Val Cys Ile Thr Gly Val Lys Cys Thr Thr Asn Leu Met Pro Ala 1860	1865	1870
Glu Lys Ile Lys Ser Ser Met Thr Gln Leu Ser Thr Thr Thr Val Cys 1875	1880	1885
Lys Thr Asp Pro Gln Arg Glu Pro Lys Gly Ile Leu Arg His Val Lys 1890	1895	1900
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<211> 4544

<212> PRT

<213> Homo sapiens

<400> 22

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Cys	Leu	Ile	Leu	Leu	Leu	Phe	Lys	Leu	Leu	Ala	Thr	Val	Ser	Gln	Gly
	20							25					30		
Leu	Pro	Gly	Thr	Gly	Pro	Leu	Gly	Phe	His	Phe	Thr	His	Ser	Ile	Tyr
	35					40					45				
Asn	Ala	Thr	Val	Tyr	Glu	Asn	Ser	Ala	Ala	Arg	Thr	Tyr	Val	Asn	Ser
	50					55					60				
Gln	Ser	Arg	Met	Gly	Ile	Thr	Leu	Ile	Asp	Leu	Ser	Trp	Asp	Ile	Lys
	65				70					75				80	
Tyr	Arg	Ile	Val	Ser	Gly	Asp	Glu	Glu	Gly	Phe	Phe	Lys	Ala	Glu	Glu
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Val	Ile	Ile	Ala	Asp	Phe	Cys	Phe	Leu	Arg	Ile	Arg	Thr	Lys	Gly	Gly
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Asn	Ser	Ala	Ile	Leu	Asn	Arg	Glu	Ile	Gln	Asp	Asn	Tyr	Leu	Leu	Ile
		115					120					125			
Val	Lys	Gly	Ser	Val	Arg	Gly	Glu	Asp	Leu	Glu	Ala	Trp	Thr	Lys	Val
	130					135					140				
Asn	Ile	Gln	Val	Leu	Asp	Met	Asn	Asp	Leu	Arg	Pro	Leu	Phe	Ser	Pro
	145				150					155				160	
Thr	Thr	Tyr	Ser	Val	Thr	Ile	Ala	Glu	Ser	Thr	Pro	Leu	Arg	Thr	Ser
			165						170					175	

Val Ala Gln Val Thr Ala Thr Asp Ala Asp Ile Gly Ser Asn Gly Glu
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 Phe Tyr Tyr Tyr Phe Lys Asn Lys Val Asp Leu Phe Ser Val His Pro
 195 200 205
 Thr Ser Gly Val Ile Ser Leu Ser Gly Arg Leu Asn Tyr Asp Glu Lys
 210 215 220
 Asn Arg Tyr Asp Leu Glu Ile Leu Ala Val Asp Arg Gly Met Lys Leu
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 Tyr Gly Asn Asn Gly Val Ser Ser Thr Ala Lys Leu Tyr Val His Ile
 245 250 255
 Glu Arg Ile Asn Glu His Ala Pro Thr Ile His Val Val Thr His Val
 260 265 270
 Pro Phe Ser Leu Glu Lys Glu Pro Thr Tyr Ala Val Val Thr Val Asp
 275 280 285
 Asp Leu Asp Asp Gly Ala Asn Gly Glu Ile Glu Ser Val Ser Ile Val
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 Ala Gly Asp Pro Leu Asp Gln Phe Phe Leu Ala Lys Glu Gly Lys Trp
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 Leu Asn Glu Tyr Lys Ile Lys Glu Arg Lys Gln Ile Asp Trp Glu Ser
 325 330 335
 Phe Pro Tyr Gly Tyr Asn Leu Thr Leu Gln Ala Lys Asp Lys Gly Ser
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 Pro Gln Lys Cys Ser Ala Leu Lys Ala Val Tyr Ile Gly Asn Pro Thr
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 Ile Ser Glu Phe Ser Pro Pro Gly Val Val Val Ala Ile Val Lys Leu
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 Arg Pro Leu Asn Thr Val Lys Lys Glu Val Tyr Lys Leu Glu Val Thr
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 Asn Lys Glu Gly Asp Leu Lys Ala Gln Val Thr Ile Ser Ile Glu Asp
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 Ala Asn Asp His Thr Pro Glu Phe Gln Gln Pro Leu Tyr Asp Ala Tyr
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Val	Asn	Glu	Ser	Val	Pro	Val	Gly	Thr	Ser	Val	Leu	Thr	Val	Ser	Ala	485	490	495
Ser	Asp	Lys	Asp	Lys	Gly	Glu	Asn	Gly	Tyr	Ile	Thr	Tyr	Ser	Ile	Ala	500	505	510
Ser	Leu	Asn	Leu	Leu	Pro	Phe	Val	Ile	Asn	Gln	Phe	Thr	Gly	Val	Ile	515	520	525
Ser	Thr	Thr	Glu	Glu	Leu	Asp	Phe	Glu	Ser	Ser	Pro	Glu	Ile	Tyr	Arg	530	535	540
Phe	Ile	Val	Arg	Ala	Ser	Asp	Trp	Gly	Ser	Pro	Tyr	Arg	His	Glu	Ser	545	550	555
Glu	Val	Asn	Val	Thr	Ile	Arg	Ile	Gly	Asn	Val	Asn	Asp	Asn	Ser	Pro	565	570	575
Leu	Phe	Glu	Lys	Val	Ala	Cys	Gln	Gly	Val	Ile	Ser	Tyr	Asp	Phe	Pro	580	585	590
Val	Gly	Gly	His	Ile	Thr	Ala	Val	Ser	Ala	Ile	Asp	Ile	Asp	Glu	Leu	595	600	605
Glu	Leu	Val	Lys	Tyr	Lys	Ile	Ile	Ser	Gly	Asn	Glu	Leu	Gly	Phe	Phe	610	615	620
Tyr	Leu	Asn	Pro	Asp	Ser	Gly	Val	Leu	Gln	Leu	Lys	Lys	Ser	Leu	Thr	625	630	635
Asn	Ser	Gly	Ile	Lys	Asn	Gly	Asn	Phe	Ala	Leu	Arg	Ile	Thr	Ala	Thr	645	650	655
Asp	Gly	Glu	Asn	Leu	Ala	Asp	Pro	Met	Ser	Ile	Asn	Ile	Ser	Val	Leu	660	665	670
His	Gly	Lys	Val	Ser	Ser	Lys	Ser	Phe	Ser	Cys	Arg	Glu	Thr	Arg	Val	675	680	685
Ala	Gln	Lys	Leu	Ala	Glu	Lys	Leu	Leu	Ile	Lys	Ala	Lys	Ala	Asn	Gly	690	695	700
Lys	Leu	Asn	Leu	Glu	Asp	Gly	Phe	Leu	Asp	Phe	Tyr	Ser	Ile	Asn	Arg	705	710	715
Gln	Gly	Pro	Tyr	Phe	Asp	Lys	Ser	Phe	Pro	Ser	Asp	Val	Ala	Val	Lys	725	730	735
Glu	Asp	Leu	Pro	Val	Gly	Ala	Asn	Ile	Leu	Lys	Ile	Lys	Ala	Tyr	Asp	740	745	750
Ala	Asp	Ser	Gly	Phe	Asn	Gly	Lys	Val	Leu	Phe	Thr	Ile	Ser	Asp	Gly	755	760	765
Asn	Thr	Asp	Ser	Cys	Phe	Asn	Ile	Asp	Met	Glu	Thr	Gly	Gln	Leu	Lys	770	775	780

Val	Leu	Met	Pro	Met	Asp	Arg	Glu	His	Thr	Asp	Leu	Tyr	Leu	Leu	Asn	
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Ile	Thr	Ile	Tyr	Asp	Leu	Gly	Asn	Pro	Gln	Lys	Ser	Ser	Trp	Arg	Leu	
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Glu	Val	Thr	Tyr	Ser	Val	Leu	Thr	Asp	Thr	Gln	Gln	Phe	Ala	Ile	Asn	
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Ser	Ser	Thr	Gly	Ile	Val	Tyr	Val	Ala	Asp	Gln	Leu	Asp	Arg	Glu	Ser	
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 Thr Asp Arg Gly Val Val Pro Leu Tyr Ser Thr Ile Glu Val Tyr Ile
 1125 1130 1135
 Glu Val Glu Asp Val Asn Asp Asn Ala Pro Leu Thr Ser Glu Pro Leu
 1140 1145 1150
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 1155 1160 1165
 Gln Ile Gln Ala Glu Asp Pro Asp Ser Ser Ser Asn Glu Lys Leu Thr
 1170 1175 1180
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 Val Thr Asp Val Asn Asp Asn Pro Pro Val Phe Thr Gln Ala Val Phe
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 Glu Thr Ile Leu Leu Leu Pro Thr Tyr Val Gly Val Glu Val Leu Lys
 1890 1895 1900
 Val Ser Ala Thr Asp Pro Asp Ser Glu Val Pro Pro Glu Leu Thr Tyr
 1905 1910 1915 1920
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 1925 1930 1935
 Gly Val Leu Thr Ile Lys Asn Asn Asn Leu Ser Lys Asp His Tyr Met
 1940 1945 1950
 Leu Ile Val Lys Val Ser Asp Gly Lys Phe Tyr Ser Thr Ser Met Val
 1955 1960 1965
 Thr Ile Met Val Lys Glu Ala Met Asp Ser Gly Leu His Phe Thr Gln
 1970 1975 1980
 Ser Phe Tyr Ser Thr Ser Ile Ser Glu Asn Asn Thr Asn Ile Thr Lys
 1985 1990 1995 2000

Val Ala Ile Val Asn Ala Val Gly Asn Arg Leu Asn Glu Pro Leu Lys
2005 2010 2015
Tyr Ser Ile Leu Asn Pro Gly Asn Lys Phe Lys Ile Lys Ser Thr Ser
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His Phe Glu Ile Asn Pro Asn Ser Gly Asn Val Ile Leu Lys Glu Ala
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Lys Asp Gly Gly Lys Pro Ser Leu Ser Thr Ser Val Glu Leu Pro Ile
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2180 2185 2190
Ala Ser Val Asn Glu Asp Ile Arg Met Asn Thr Pro Ile Leu Ser Ile
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Asn Ala Thr Ser Pro Glu Gly Gln Gly Ile Ile Tyr Ile Ile Ile Asp
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Lys Val Val Ser Pro Leu Asp Tyr Glu Val Thr Ser Ala Tyr Lys Leu
2245 2250 2255
Thr Ile Arg Ala Ser Asp Ala Leu Thr Gly Ala Arg Ala Glu Val Thr
2260 2265 2270
Val Asp Leu Leu Val Asn Asp Val Asn Asp Asn Pro Pro Ile Phe Asp
2275 2280 2285
Gln Pro Thr Tyr Asn Thr Thr Leu Ser Glu Ala Ser Leu Ile Gly Thr
2290 2295 2300

Pro Val Leu Gln Val Val Ser Ile Asp Ala Asp Ser Glu Asn Asn Lys
 2305 2310 2315 2320
 Met Val His Tyr Gln Ile Val Gln Asp Thr Tyr Asn Ser Thr Asp Tyr
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 Phe His Ile Asp Ser Ser Ser Gly Leu Ile Leu Thr Ala Arg Met Leu
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 Asp His Glu Leu Val Gln His Cys Thr Leu Lys Val Arg Ser Ile Asp
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 Ser Gly Phe Pro Ser Leu Ser Ser Glu Val Leu Val His Ile Tyr Ile
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 Ser Tyr Val Ser Glu Leu Ala Pro Arg Gly His Phe Val Thr Cys Val
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 Tyr Ser Leu Asn Val Ser Val Ser Asp Gly Leu Phe Thr Ser Thr Ala
 2465 2470 2475 2480
 Gln Val His Ile Arg Val Leu Gly Ala Asn Leu Tyr Ser Pro Ala Phe
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 Ser Gln Ser Thr Tyr Val Ala Glu Val Arg Glu Asn Val Ala Ala Gly
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2740 2745 2750
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2755 2760 2765
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2785 2790 2795 2800
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 Tyr Arg Gly Asn Val Lys Glu Ser Asp Pro Pro Gly Glu Val Val Ala
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Thr Phe Ala Leu Lys Ser Glu Gln Lys Ser Leu Phe Lys Val Asn Ser
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Lys Gln Asp Ser Leu Arg Ile Ile Ser Ile Gln Pro Val Ala Gly Thr
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 Arg Gly Thr Ser Ser Ser Asp Val Ser Ala Asn Cys Gly Phe Asp Asp
 4500 4505 4510
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Leu	Leu	Ser	Lys	Ala	Leu	Lys	Asp	Ile	Gln	Ser	Gly	Ala	Leu	Asp	Ile	35	40	45	
Asn	Lys	Ala	Gly	Ile	Leu	Tyr	Gly	Ile	Pro	Gln	Lys	Thr	Leu	Leu	Leu	50	55	60	
His	Leu	Glu	Ala	Leu	Pro	Ala	Gly	Lys	Pro	Ala	Ser	Phe	Lys	Asn	Lys	65	70	75	80
Thr	Arg	Asp	Phe	His	Asp	Ser	Tyr	Ser	Tyr	Lys	Asp	Ser	Lys	Glu	Thr	85	90	95	
Cys	Ala	Val	Leu	Gln	Lys	Val	Ala	Leu	Trp	Ala	Arg	Ala	Gln	Ala	Glu	100	105	110	
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Phe	Pro	Thr	Ala	Ser	Thr	Tyr	Leu	His	Gln	Leu	Thr	Leu	Gln	Lys	Met	130	135	140	
Val	Thr	Gln	Phe	Lys	Glu	Lys	Asn	Glu	Ser	Leu	Gln	Tyr	Glu	Thr	Ser	145	150	155	160
Asn	Pro	Thr	Val	Gln	Leu	Lys	Ile	Pro	Gln	Leu	Arg	Val	Ser	Ser	Val	165	170	175	
Ser	Lys	Ser	Gln	Pro	Asp	Gly	Ser	Gly	Leu	Leu	Asp	Val	Met	Tyr	Gln	180	185	190	
Val	Ser	Lys	Thr	Ser	Ser	Val	Leu	Glu	Gly	Ser	Ala	Leu	Gln	Lys	Leu	195	200	205	
Lys	Asn	Ile	Leu	Pro	Lys	Gln	Asn	Lys	Ile	Glu	Cys	Ser	Gly	Pro	Val	210	215	220	
Thr	His	Ser	Ser	Val	Asp	Ser	Tyr	Phe	Leu	His	Gly	Asp	Leu	Ser	Pro	225	230	235	240
Leu	Cys	Leu	Asn	Ser	Lys	Asn	Gly	Thr	Val	Asp	Gly	Thr	Ser	Glu	Asn	245	250	255	
Thr	Glu	Asp	Gly	Leu	Asp	Arg	Lys	Asp	Ser	Lys	Gln	Pro	Arg	Lys	Lys	260	265	270	
Arg	Gly	Arg	Tyr	Arg	Gln	Tyr	Asp	His	Glu	Ile	Met	Glu	Glu	Ala	Ile	275	280	285	
Ala	Met	Val	Met	Ser	Gly	Lys	Met	Ser	Val	Ser	Lys	Ala	Gln	Gly	Ile	290	295	300	

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Gln Leu Val Ala Gln Gly Glu Pro Val Val Gln Ser Gln Gly Ala Ile
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Gly Ile Ser Leu Leu Pro Ile Leu Ala Leu Leu Leu Gly Gly Arg Asp
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Leu Ser Ser Leu Phe Ser Leu Trp Pro Val Leu Arg Tyr Phe Gln Lys
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Gln Gly Gln Val Pro Thr Gly Leu Arg Gly Gln Ala Leu Leu Lys Val
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Thr Ser Val Thr Val Asp Gly Arg Gly Ala Ser Val Phe Ile Gln Thr
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Asp Lys Pro Val Tyr Arg Pro Gln His Arg Val Leu Ile Ser Ile Phe
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Thr Val Ser Pro Asn Leu Arg Pro Val Asn Glu Lys Leu Glu Ala Tyr
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Ile Leu Asp Pro Arg Gly Ser Arg Met Ile Glu Trp Arg His Leu Lys

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Tyr Phe Ser Val Lys Ser Thr Cys Pro Cys Asn Phe Thr Leu Tyr Tyr		

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Pro Ile Arg Leu Thr His Leu Ser Glu Thr Glu Pro Pro Pro Ala Pro 565 570 575		
Glu Ala Glu Val Asp Val Cys Val Thr Ser Leu His Leu Ala Val Thr 580 585 590		
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Phe Glu Asn Gln Val Ser Val Thr Tyr Ser Ala Asn Glu Thr Gln Pro 625 630 635 640		
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Cys Val Ala Ala Val Asp Lys Ser Val Tyr Leu Leu Arg Ser Gly Phe 660 665 670		
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Leu Tyr Thr Asp Glu Ala Val Pro Ala Phe Gln Pro His Thr Gly Ser 755 760 765		
Leu Val Ala Val Ala Pro Ser Arg His Pro Pro Arg Thr Glu Lys Arg 770 775 780		
Lys Arg Thr Phe Phe Pro Glu Thr Trp Ile Trp His Cys Leu Asn Ile 785 790 795 800		
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Arg Val Ser Gln Ser Val Val Ser Ala Glu Val Glu Met Thr Ala Tyr 1410 1415 1420		
Ala Leu Leu Thr Tyr Thr Leu Leu Gly Asp Val Ala Ala Ala Leu Pro		

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Ser Thr Gln Asp Thr Cys Val Ala Leu Gln Ala Leu Ala Glu Tyr Ala	1460	1465	1470
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Thr Asn Leu Asp Tyr Gln Glu Thr Phe Glu Leu His Arg Thr Asn Gln	1490	1495	1500
Lys Val Leu Gln Thr Ala Ala Ile Pro Ser Leu Pro Thr Gly Leu Phe	1505	1510	1515
Val Ser Ala Lys Gly Asp Gly Cys Cys Leu Met Gln Ile Asp Val Thr	1525	1530	1535
Tyr Asn Val Pro Asp Pro Val Ala Lys Pro Ala Phe Gln Leu Leu Val	1540	1545	1550
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Gln Leu Leu Leu Asp Lys His Met Gly Met Lys Arg Tyr Glu Val Ala	1635	1640	1645
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Gln Gly His Ala Tyr Asn Lys Ser Phe Glu Val Gln Lys Tyr Val Leu
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 Asp Ala Cys Glu Thr Gly Thr Val Arg Ala Arg Tyr Thr Phe Gly Lys
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 Asp Ala Val Val Ile Ala Leu Val Asn Arg Met Thr Ser Leu Tyr Ala
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 Glu His Cys Leu Asp Arg Asn Ile Leu Ser Leu Ile Asn Asp Phe Asp
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 Phe Pro Glu Gln Ser Ile Ser Arg Asp Asp Tyr Pro Ala Val Leu Met
 340 345 350
 His Leu Asn Ala Thr Trp Pro Lys Arg Val Ala Gln Leu Pro Leu Lys
 355 360 365
 Ala Cys Leu Leu Glu Asp Phe Leu Asp Lys Ser Ala Ser Gly Pro Gly
 370 375 380
 Leu Ala Phe Val Val Phe Thr Glu Thr Asp Leu His Met Pro Gly Ala
 385 390 395 400
 Pro Val Trp Ala Met Leu Phe Phe Gly Met Leu Phe Thr Leu Gly Leu
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 Ser Thr Met Phe Gly Thr Val Glu Ala Val Ile Thr Pro Leu Leu Asp
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 Val Gly Val Leu Pro Arg Trp Val Pro Lys Glu Ala Leu Thr Gly Pro
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 Gly Leu Val Cys Leu Val Cys Phe Leu Ser Ala Thr Cys Phe Thr Leu
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 Gln Ser Gly Asn Tyr Trp Leu Glu Ile Phe Asp Asn Phe Ala Ala Ser
 465 470 475 480

Leu Asn Leu Leu Met Leu Ala Phe Leu Glu Val Val Gly Val Val Tyr
 485 490 495
 Val Tyr Gly Met Lys Arg Phe Cys Asp Asp Ile Ala Trp Met Thr Gly
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 Arg Arg Pro Ser Pro Tyr Trp Arg Leu Thr Trp Arg Val Val Ser Pro
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 Pro Leu Arg Tyr Lys Ala Trp Asn Pro Lys Tyr Glu Leu Phe Pro Ser
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 Arg Gln Glu Lys Leu Tyr Pro Gly Trp Ala Arg Ala Ala Cys Val Leu
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 <213> Homo sapiens

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<210> 34

<211> 639

<212> PRT

<213> Homo sapiens

<400> 34

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          20                      25                      30

Gly Phe Ala Val Gly Leu Gly Asn Ile Trp Arg Phe Pro Tyr Leu Cys
          35                      40                      45

Gln Thr Tyr Gly Gly Gly Ala Phe Leu Ile Pro Tyr Val Ile Ala Leu
          50                      55                      60

Val Phe Glu Gly Ile Pro Ile Phe His Val Glu Leu Ala Ile Gly Gln
          65                      70                      75                      80

Arg Leu Arg Lys Gly Ser Val Gly Val Trp Thr Ala Ile Ser Pro Tyr
          85                      90                      95

Leu Ser Gly Val Gly Leu Gly Cys Val Thr Leu Ser Phe Leu Ile Ser
          100                     105                     110

Leu Tyr Tyr Asn Thr Ile Val Ala Trp Val Leu Trp Tyr Leu Leu Asn
          115                     120                     125

Ser Phe Gln His Pro Leu Pro Trp Ser Ser Cys Pro Pro Asp Leu Asn
          130                     135                     140

Arg Thr Gly Phe Val Glu Glu Cys Gln Gly Ser Ser Ala Val Ser Tyr
          145                     150                     155                     160

Phe Trp Tyr Arg Gln Thr Leu Asn Ile Thr Ala Asp Ile Asn Asp Ser
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Gly Ser Ile Gln Trp Trp Leu Leu Ile Cys Leu Ala Ala Ser Trp Ala
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Val	Val	Tyr	Met	Cys	Val	Ile	Arg	Gly	Ile	Glu	Thr	Thr	Gly	Lys	Val	195	200	205
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Ile	Arg	Gly	Leu	Thr	Leu	Pro	Gly	Ala	Thr	Lys	Gly	Leu	Ile	Tyr	Leu	225	230	235
Phe	Thr	Pro	Asn	Met	His	Ile	Leu	Gln	Asn	Pro	Arg	Val	Trp	Leu	Asp	245	250	255
Ala	Ala	Thr	Gln	Ile	Phe	Phe	Ser	Leu	Ser	Leu	Ala	Phe	Gly	Gly	His	260	265	270
Ile	Ala	Phe	Ala	Ser	Tyr	Asn	Ser	Pro	Arg	Arg	Asn	Asp	Cys	Gln	Lys	275	280	285
Asp	Ala	Val	Val	Ile	Ala	Leu	Val	Asn	Arg	Met	Thr	Ser	Leu	Tyr	Ala	290	295	300
Ser	Ile	Ala	Val	Phe	Ser	Val	Leu	Gly	Phe	Lys	Ala	Thr	Asn	Asp	Gln	305	310	315
Glu	His	Cys	Leu	Asp	Arg	Asn	Ile	Leu	Ser	Leu	Ile	Asn	Asp	Phe	Asp	325	330	335
Phe	Pro	Glu	Gln	Ser	Ile	Ser	Arg	Asp	Asp	Tyr	Pro	Ala	Val	Leu	Met	340	345	350
His	Leu	Asn	Ala	Thr	Trp	Pro	Lys	Arg	Val	Ala	Gln	Leu	Pro	Leu	Lys	355	360	365
Ala	Cys	Leu	Leu	Glu	Asp	Phe	Leu	Asp	Lys	Ser	Ala	Ser	Gly	Pro	Gly	370	375	380
Leu	Ala	Phe	Val	Val	Phe	Thr	Glu	Thr	Asp	Leu	His	Met	Pro	Gly	Ala	385	390	395
Pro	Val	Trp	Ala	Met	Leu	Phe	Phe	Gly	Met	Leu	Phe	Thr	Leu	Gly	Leu	405	410	415
Ser	Thr	Met	Phe	Gly	Thr	Val	Glu	Ala	Val	Ile	Thr	Pro	Leu	Leu	Asp	420	425	430
Val	Gly	Val	Leu	Pro	Arg	Trp	Val	Pro	Lys	Glu	Ala	Leu	Thr	Gly	Pro	435	440	445
Gly	Leu	Val	Cys	Leu	Val	Cys	Phe	Leu	Ser	Ala	Thr	Cys	Phe	Thr	Leu	450	455	460
Gln	Ser	Gly	Asn	Tyr	Trp	Leu	Glu	Ile	Phe	Asp	Asn	Phe	Ala	Ala	Ser	465	470	475
Leu	Asn	Leu	Leu	Met	Leu	Ala	Phe	Leu	Glu	Val	Val	Gly	Val	Val	Tyr	485	490	495

Val Tyr Gly Met Lys Arg Phe Cys Asp Asp Ile Ala Trp Met Thr Gly
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Arg Arg Pro Ser Pro Tyr Trp Arg Leu Thr Trp Arg Val Val Ser Pro
515 520 525

Leu Leu Leu Thr Ile Phe Val Ala Tyr Ile Ile Leu Leu Phe Trp Lys
530 535 540

Pro Leu Arg Tyr Lys Ala Trp Asn Pro Gln Glu Leu Phe Pro Ser Arg
545 550 555 560

Gln Glu Lys Leu Tyr Pro Gly Trp Ala Arg Ala Ala Cys Val Leu Leu
565 570 575

Ser Leu Leu Pro Val Leu Trp Val Pro Val Ala Ala Leu Ala Gln Leu
580 585 590

Leu Thr Arg Arg Arg Arg Thr Trp Arg Gln Ala His Ala Glu Ala Gly
595 600 605

Leu Val Phe Gln Asp Phe Glu Lys Gln Arg Pro Gly Val Gly Ile Gln
610 615 620

Tyr Leu Ile Pro Met Leu Cys Asn Leu Leu Gln Thr Leu Phe Arg
625 630 635

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<212> DNA
<213> Homo sapiens

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<210> 36
<211> 517
<212> PRT
<213> Homo sapiens

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              20              25              30

Leu Ala Gly Thr Ser Glu Phe Leu Gly Pro Asp Gly Ala Gly Val Glu
  35              40              45

Val Val Ile Glu Ser Arg Ala Asn Ala Lys Gly Val Arg Glu Glu Asp
  50              55              60

Ala Leu Leu Glu Asn Gly Ser Gln Ser Asn Glu Ser Asp Asp Val Ser
  65              70              75              80

Thr Asp Arg Gly Pro Ala Pro Pro Ser Pro Leu Lys Glu Thr Ser Phe
              85              90              95

Ser Ile Gly Leu Gln Val Leu Phe Pro Phe Leu Leu Ala Gly Phe Gly
  100              105              110

Thr Val Ala Gly Met Val Leu Asp Ile Val Gln His Trp Glu Val
  115              120              125

Phe Gln Lys Val Thr Glu Val Phe Ile Leu Val Pro Ala Leu Leu Gly
  130              135              140

Leu Lys Gly Asn Leu Glu Met Thr Leu Ala Ser Arg Leu Ser Thr Ala
  145              150              155              160

Ala Ser Ile Asn Ile Gly His Met Asp Thr Pro Lys Glu Leu Trp Arg
              165              170              175

Met Ile Thr Gly Asn Met Ala Leu Ile Gln Val Gln Ala Thr Val Val
  180              185              190

Gly Phe Leu Ala Ser Ile Ala Ala Val Val Phe Gly Trp Ile Pro Asp
  195              200              205

Gly His Phe Ser Ile Pro His Ala Phe Leu Leu Cys Ala Ser Ser Val
  210              215              220

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Ala Thr Ala Phe Ile Ala Ser Leu Val Leu Gly Met Ile Met Ile Gly
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 Val Ile Ile Gly Ser Arg Lys Ile Gly Ile Asn Pro Asp Asn Val Ala
 245 250 255
 Thr Pro Ile Ala Ala Ser Leu Gly Asp Leu Ile Thr Leu Ala Leu Leu
 260 265 270
 Ser Gly Ile Ser Trp Gly Leu Leu Thr Ser Ala Leu Ser Asp His Trp
 275 280 285
 Arg Tyr Ile Tyr Pro Leu Val Cys Ala Phe Phe Val Ala Leu Leu Pro
 290 295 300
 Val Trp Val Val Leu Ala Arg Arg Ser Pro Ala Thr Arg Glu Val Leu
 305 310 315 320
 Tyr Ser Gly Trp Glu Pro Val Ile Ile Ala Met Ala Ile Ser Ser Val
 325 330 335
 Gly Gly Leu Ile Leu Asp Lys Thr Val Ser Asp Pro Asn Phe Ala Gly
 340 345 350
 Met Ala Val Phe Thr Pro Val Ile Asn Gly Val Gly Gly Asn Leu Val
 355 360 365
 Ala Val Gln Ala Ser Arg Ile Ser Thr Phe Leu His Met Asn Gly Met
 370 375 380
 Pro Gly Glu Asn Ser Glu Gln Ala Pro Arg Arg Cys Pro Ser Pro Cys
 385 390 395 400
 Thr Thr Phe Phe Ser Pro Gly Val Asn Ser Arg Ser Ala Arg Val Leu
 405 410 415
 Phe Leu Leu Val Val Pro Gly His Leu Val Phe Leu Tyr Thr Ile Ser
 420 425 430
 Cys Met Gln Gly Gly His Thr Thr Leu Thr Leu Ile Phe Ile Ile Phe
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 Tyr Met Thr Ala Ala Leu Leu Gln Val Leu Ile Leu Leu Tyr Ile Ala
 450 455 460
 Asp Trp Met Val His Trp Met Trp Gly Arg Gly Leu Asp Pro Asp Asn
 465 470 475 480
 Phe Ser Ile Pro Tyr Leu Thr Ala Leu Gly Asp Leu Leu Gly Thr Gly
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 Thr Asp Val Gly Asp
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 <211> 5175
 <212> DNA
 <213> Homo sapiens

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Trp Thr Ile Thr Leu Phe Leu Gly Leu Tyr Leu Cys Ile Phe Ser Glu
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 His Gly Glu Ile Phe Cys Tyr Leu Ala Lys Tyr Trp Leu Lys Gly Phe
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 Cys Trp Glu Phe Ser Pro Ser Met Tyr Phe Leu Ser Leu Glu Gln Ile
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 Pro Lys Thr Pro Leu Thr Ser Leu Leu Ile Val Asn Asn Thr Gly Ser
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<212> DNA

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 <212> PRT
 <213> Homo sapiens

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Leu	Val	Ala	Ala	Val	Trp	Pro	Tyr	Arg	Arg	Leu	Ala	Leu	Leu	Arg	Arg
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Leu	Thr	Val	Leu	Pro	Phe	Ala	Gly	Leu	Leu	Tyr	Pro	Ala	Trp	Leu	Gly
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Ala	Ala	Ala	Ala	Gly	Cys	Trp	Gly	Trp	Gly	Ser	Ser	Trp	Val	Gln	Ile
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Pro	Glu	Ala	Ala	Leu	Leu	Val	Leu	Ala	Thr	Ile	Cys	Leu	Ala	His	Ala
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Phe	Gln	Glu	Asp	Ser	Glu	Ile	Arg	Ala	Ala	Glu	Lys	Lys	Phe	Gly	Ser
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Pro Asp Arg Val Leu Asp Leu Gln Ala Asp Ser Arg Leu His Val Ile		
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Phe Gly Gly Thr Lys Val Val Gln His Ile Pro Pro Gln Lys Ala Thr		
385	390	395
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Thr Gly Phe Asn Thr Ser Gln Gly Lys Leu Leu Arg Thr Ile Leu Phe		
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Gly Val Lys Arg Val Thr Ala Asn Asn Leu Glu Thr Phe Ile Phe Ile		
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Leu Phe Leu Leu Val Phe Ala Ile Ala Ala Ala Tyr Val Trp Ile		
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Glu Gly Thr Lys Asp Pro Ser Arg Asn Arg Tyr Lys Leu Phe Leu Glu		
465	470	475
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Cys Thr Leu Ile Leu Thr Ser Val Val Pro Pro Glu Leu Pro Ile Glu		
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Leu Ser Leu Ala Val Asn Thr Ser Leu Ile Ala Leu Ala Lys Leu Tyr		
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Met Tyr Cys Thr Glu Pro Phe Arg Ile Pro Phe Ala Gly Lys Val Glu		
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Val Cys Cys Phe Asp Lys Thr Gly Thr Leu Thr Ser Asp Ser Leu Val		
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Val Arg Gly Val Ala Gly Leu Arg Asp Gly Lys Glu Val Thr Pro Val		
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Phe Pro Arg Ser Ile Lys Thr Gln Gly Leu Lys Ile His Gln Arg Phe		
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His Phe Ala Ser Ala Leu Lys Arg Met Ser Val Leu Ala Ser Tyr Glu		

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His	Ile	His	Thr	Glu	Ile	Ser	Arg	Glu	Gly	Ala	Arg	Val	Leu	Ala	Leu
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Gln	Asn	Ala	Ser	His	Arg	Val	Val	Met	Ile	Thr	Gly	Asp	Asn	Pro	Leu
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	1155	1160 1165
Phe Lys Leu Val Ile Ala Gln Val Leu Leu Leu Asp Phe Cys Leu Ala		
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<213> Homo sapiens

<400> 43

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<211> 388

<212> PRT

<213> Homo sapiens

<400> 44

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Glu Glu Ile Ile Arg Leu Ile Val Gln Lys Arg Asn Val Thr Arg Ser
      35              40              45

Ile Asp Arg Ser Val Gly Ala Gly Gln Glu Gln Val Ile Met Glu Cys
      50              55              60

Leu Lys Pro Phe Tyr Phe Asn Tyr Pro Ser Leu Asp Ser Glu Val Leu
      65              70              75              80

Asp Asp Asp Arg Ala Ile Asp Gly Lys Asp Thr Ile Ile Leu Val Tyr
      85              90              95

Lys Glu Leu Ser Arg Asp Leu Ala Ser Cys Val Pro Ala Thr Pro Ala
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Val Ala Glu Arg Val Gln Gly Thr Val Gln Ala Met Ala Ser Lys Gly
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Ala Ser Pro Lys Ser Arg Gln Leu Ser Gln Gly Val Lys Pro Gly Ser
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<211> 853

<212> DNA

<213> Homo sapiens

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 <212> PRT
 <213> Homo sapiens

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Lys Val Glu Lys Met Leu Ile Ser Ser Ile Lys Glu Lys Tyr Pro Ser
      50              55              60

His Arg Tyr Phe Phe Ile Val Arg Asn Leu Ala Ala Gly Glu Lys Gly
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Val Leu Thr Asp Asn Pro Thr Trp Ile Ile Asp Pro Ile Asp Gly Thr
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Thr Lys Phe Val His Arg Phe Pro Phe Val Ala Val Ser Ile Gly Leu
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Val Val Asn Lys Lys Val Glu Phe Gly Val Val Tyr Ser Cys Val Glu
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Asp Lys Arg Tyr Thr Val Arg Lys Gly Lys Gly Ala Phe Tyr Asn Gly
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Gln Lys Leu Gln Val Ser Gln Glu Gly Asp Ile Thr Lys Ser Leu Leu
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Val Thr Glu Leu Gly Tyr Cys Arg Thr Ser Glu Ile Val Arg Thr Ile
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Ala Glu Ala Phe Tyr Glu Met Gly Ile His Cys Trp Asp Ile Ala Val
210 215 220

Ala Ala Ile Ile Val Thr Glu Ala Gly Gly Val Leu Met Asp Val Thr
225 230 235 240

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<210> 47
<211> 2071
<212> DNA
<213> Homo sapiens

<400> 47

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cagctttgaa aaccactaag tccagagaca aaccaagtc tggatccacc agacaccccc 1920
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<210> 48
 <211> 566
 <212> PRT
 <213> Homo sapiens

<400> 48

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Met Met Cys Leu Glu Cys Ala Ser Ala Ala Gly Gly Ala Glu Glu
  1              5              10              15

Glu Glu Ala Asp Ala Glu Arg Arg Arg Arg Arg Gly Ala Gln Arg
          20              25              30

Gly Ala Gly Gly Ser Gly Cys Cys Gly Ala Arg Gly Ala Gly Gly Ala
      35              40              45

Gly Val Ser Ala Ala Gly Asp Glu Val Gln Thr Leu Ser Gly Ser Val
      50              55              60

Arg Arg Ala Pro Thr Gly Pro Pro Gly Thr Pro Gly Thr Pro Gly Cys
      65              70              75              80

Ala Ala Thr Ala Lys Gly Pro Gly Ala Gln Gln Pro Lys Pro Ala Ser
          85              90              95

Leu Gly Arg Gly Arg Gly Ala Ala Ala Ala Ile Leu Ser Leu Gly Asn
      100              105              110

Val Leu Asn Tyr Leu Asp Arg Tyr Thr Val Ala Gly Val Leu Leu Asp
      115              120              125

Ile Gln Gln His Phe Gly Val Lys Asp Arg Gly Ala Gly Leu Leu Gln
      130              135              140

Ser Val Phe Ile Cys Ser Phe Met Val Ala Ala Pro Ile Phe Gly Tyr
      145              150              155              160

Leu Gly Asp Arg Phe Asn Arg Lys Val Ile Leu Ser Cys Gly Ile Phe
          165              170              175

Phe Trp Ser Ala Val Thr Phe Ser Ser Ser Phe Ile Pro Gln Gln Tyr
          180              185              190

Phe Trp Leu Leu Val Leu Ser Arg Gly Leu Val Gly Ile Gly Glu Ala
      195              200              205

Ser Tyr Ser Thr Ile Ala Pro Thr Ile Ile Gly Asp Leu Phe Thr Lys
      210              215              220

Asn Thr Arg Thr Leu Met Leu Ser Val Phe Tyr Phe Ala Ile Pro Leu
      225              230              235              240

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Gly Ser Gly Leu Gly Tyr Ile Thr Gly Ser Ser Val Lys Gln Ala Ala
 245 250 255
 Gly Asp Trp His Trp Ala Leu Arg Val Ser Pro Val Leu Gly Met Ile
 260 265 270
 Thr Gly Thr Leu Ile Leu Ile Leu Val Pro Ala Thr Lys Arg Gly His
 275 280 285
 Ala Asp Gln Leu Gly Asp Gln Leu Lys Ala Arg Thr Ser Trp Leu Arg
 290 295 300
 Asp Met Lys Ala Leu Ile Arg Asn Arg Ser Tyr Val Phe Ser Ser Leu
 305 310 315 320
 Ala Thr Ser Ala Val Ser Phe Ala Thr Gly Ala Leu Gly Met Trp Ile
 325 330 335
 Pro Leu Tyr Leu His Arg Ala Gln Val Val Gln Lys Thr Ala Glu Thr
 340 345 350
 Cys Asn Ser Pro Pro Cys Gly Ala Lys Asp Ser Leu Ile Phe Gly Ala
 355 360 365
 Ile Thr Cys Phe Thr Gly Phe Leu Gly Val Val Thr Gly Ala Gly Ala
 370 375 380
 Thr Arg Trp Cys Arg Leu Lys Thr Gln Arg Ala Asp Pro Leu Val Cys
 385 390 395 400
 Ala Val Gly Met Leu Gly Ser Ala Ile Phe Ile Cys Leu Ile Phe Val
 405 410 415
 Ala Ala Lys Ser Ser Ile Val Gly Ala Tyr Ile Cys Ile Phe Val Gly
 420 425 430
 Glu Thr Leu Leu Phe Ser Asn Trp Ala Ile Thr Ala Asp Ile Leu Met
 435 440 445
 Tyr Val Val Ile Pro Thr Arg Arg Ala Thr Ala Val Ala Leu Gln Ser
 450 455 460
 Phe Thr Ser His Leu Leu Gly Asp Ala Gly Ser Pro Tyr Leu Ile Gly
 465 470 475 480
 Phe Ile Ser Asp Leu Ile Arg Gln Ser Thr Lys Asp Ser Pro Leu Trp
 485 490 495
 Glu Phe Leu Ser Leu Gly Tyr Ala Leu Met Leu Cys Pro Phe Val Val
 500 505 510
 Val Leu Gly Gly Met Phe Phe Leu Ala Thr Ala Leu Phe Phe Val Ser
 515 520 525
 Asp Arg Ala Arg Ala Glu Gln His Leu Gly Glu Arg Arg Ala Gly Val
 530 535 540

Arg Val Val His Gln Arg Gly Pro Gly Pro Gly Thr Ala Leu Ala His
 545 550 555 560

Arg Val Val Gly Ala Ser
 565

<210> 49
 <211> 752
 <212> DNA
 <213> Homo sapiens

<400> 49
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 gtgaaaaaac agattttctt tcctcaggag gacaaagtta gaggttaatt tcattcaaatt 180
 aaaataaaat taataccact tagtagtggt ttatttttgt atatttggtat acaaattaat 240
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 aacaaaatca acccatttta tcagaagtgg aacttcctcc catttcttca ggttccttat 360
 caacatcaga tttttataaa cccaggagat cagcataaga caagtgtcta cccctttggt 420
 cccactaaat atatacagtg gccaggctca gtggctcagg ccttcttggt ttattccttt 480
 aaggaaacac caaaaaagac tgttgatatg gtaaagtatt gtttctatca gaaaactgag 540
 ctgactgaag aagaaaagaa tgaccaaaaa catctgaaca aaatcaacca gtattatcag 600
 ttcaccttgc cccaatatgt aaaagctggt tatcaatatc acaaaattat gaaaccatgg 660
 aaaaacatga agacaaatgc ttaccaagtt atccccactc tggtgagtgc tctcttttta 720
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<210> 50
 <211> 240
 <212> PRT
 <213> Homo sapiens

<400> 50
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 His Glu Leu Lys His Val Tyr Lys Lys Lys Thr Asn Asn Asn Val Ser
 20 25 30
 Asp Lys Tyr Arg Asn Val Lys Asn Gln Ile Ser Ser Pro Gln Glu Asp
 35 40 45
 Lys Val Arg Gly Asn Phe His Ser Asn Lys Ile Lys Leu Ile Pro Leu
 50 55 60
 Ser Ser Val Leu Phe Leu Tyr Ile Cys Ile Gln Ile Asn Phe Phe Ser
 65 70 75 80
 Tyr Gln Glu Val Lys His Thr Val Asp Gln Lys His Tyr Val Lys Gln
 85 90 95
 Leu Asn Lys Ile Asn Pro Phe Tyr Gln Lys Trp Asn Phe Leu Pro Phe
 100 105 110
 Leu Gln Val Pro Tyr Gln His Gln Ile Phe Ile Asn Pro Gly Asp Gln
 115 120 125

His Lys Thr Ser Val Tyr Pro Phe Val Pro Thr Lys Tyr Ile Gln Trp
 130 135 140
 Pro Gly Ser Val Ala Gln Ala Phe Leu Phe Tyr Ser Phe Lys Glu Thr
 145 150 155 160
 Pro Lys Lys Thr Val Asp Met Val Lys Tyr Cys Phe Tyr Gln Lys Thr
 165 170 175
 Glu Leu Thr Glu Glu Glu Lys Asn Asp Gln Lys His Leu Asn Lys Ile
 180 185 190
 Asn Gln Tyr Tyr Gln Phe Thr Leu Pro Gln Tyr Val Lys Ala Val Tyr
 195 200 205
 Gln Tyr His Lys Ile Met Lys Pro Trp Lys Asn Met Lys Thr Asn Ala
 210 215 220
 Tyr Gln Val Ile Pro Thr Leu Val Ser Ala Leu Phe Leu Phe Ala Thr
 225 230 235 240

<210> 51
 <211> 1704
 <212> DNA
 <213> Homo sapiens

<400> 51
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 caaccaagag gcaagaggcg agagaaggaa aaaaaaaaaa aaagcgatga gttcaccaaa 240
 tatatggagc acaggaagct cagtctactc gactcctgta ttttcacaga aaatgacggt 300
 gtggattctg ctctgctgtg cgctctaccc tggcttcaact agccagaaat ctgatgatga 360
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 cgctatcaat atggaatata ctattgatat attttttgcg caaatgtggt atgacagacg 600
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 ccccaacagg atgctgagaa tttggaatga tggctcgagt ctctactccc taagggtgac 780
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 aagcaaggac aaagataaaa agaagaaaaa cctctctctt cggatgtttt ccttcaaggc 1380
 ccctaccatt gatatccgcc caagatcagc aaccattcaa atgaataatg ctacacacct 1440
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<210> 52
<211> 475
<212> PRT
<213> Homo sapiens

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<400> 52
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Pro Val Phe Ser Gln Lys Met Thr Val Trp Ile Leu Leu Leu Leu Ser
      20              25              30

Leu Tyr Pro Gly Phe Thr Ser Gln Lys Ser Asp Asp Asp Tyr Glu Asp
      35              40              45

Tyr Ala Ser Asn Lys Thr Trp Val Leu Thr Pro Lys Val Pro Glu Gly
      50              55              60

Asp Val Thr Val Ile Leu Asn Asn Leu Leu Glu Gly Tyr Asp Asn Lys
      65              70              75              80

Leu Arg Pro Asp Ile Gly Val Lys Pro Thr Leu Ile His Thr Asp Met
      85              90              95

Tyr Val Asn Ser Ile Gly Pro Val Asn Ala Ile Asn Met Glu Tyr Thr
      100             105             110

Ile Asp Ile Phe Phe Ala Gln Met Trp Tyr Asp Arg Arg Leu Lys Phe
      115             120             125

Asn Ser Thr Ile Lys Val Leu Arg Leu Asn Ser Asn Met Val Gly Lys
      130             135             140

Ile Trp Ile Pro Asp Thr Phe Phe Arg Asn Ser Lys Lys Ala Asp Ala
      145             150             155             160

His Trp Ile Thr Thr Pro Asn Arg Met Leu Arg Ile Trp Asn Asp Gly
      165             170             175

Arg Val Leu Tyr Ser Leu Arg Leu Thr Ile Asp Ala Glu Cys Gln Leu
      180             185             190

Gln Leu His Asn Phe Pro Met Asp Glu His Ser Cys Pro Leu Glu Phe
      195             200             205

Ser Ser Tyr Gly Tyr Pro Arg Glu Glu Ile Val Tyr Gln Trp Lys Arg
      210             215             220

Ser Ser Val Glu Val Gly Asp Thr Arg Ser Trp Arg Leu Tyr Gln Phe
      225             230             235             240

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Ser Phe Val Gly Leu Arg Asn Thr Thr Glu Val Val Lys Thr Thr Ser
 245 250 255
 Gly Asp Tyr Val Val Met Ser Val Tyr Phe Asp Leu Ser Arg Arg Met
 260 265 270
 Gly Tyr Phe Thr Ile Gln Thr Tyr Ile Pro Cys Thr Leu Ile Val Val
 275 280 285
 Leu Ser Trp Val Ser Phe Trp Ile Asn Lys Asp Ala Val Pro Ala Arg
 290 295 300
 Thr Ser Leu Gly Ile Thr Thr Val Leu Thr Met Thr Thr Leu Ser Thr
 305 310 315 320
 Ile Ala Arg Lys Ser Leu Pro Lys Val Ser Tyr Val Thr Ala Met Asp
 325 330 335
 Leu Phe Val Ser Val Cys Phe Ile Phe Val Phe Ser Ala Leu Val Glu
 340 345 350
 Tyr Gly Thr Leu His Tyr Phe Val Ser Asn Arg Lys Pro Ser Lys Asp
 355 360 365
 Lys Asp Lys Lys Lys Lys Asn Pro Leu Leu Arg Met Phe Ser Phe Lys
 370 375 380
 Ala Pro Thr Ile Asp Ile Arg Pro Arg Ser Ala Thr Ile Gln Met Asn
 385 390 395 400
 Asn Ala Thr His Leu Gln Glu Arg Asp Glu Glu Tyr Gly Tyr Glu Cys
 405 410 415
 Leu Asp Gly Lys Asp Cys Ala Ser Phe Phe Cys Cys Phe Glu Asp Cys
 420 425 430
 Arg Thr Gly Ala Trp Arg His Gly Arg Ile His Ile Arg Ile Ala Lys
 435 440 445
 Met Asp Ser Tyr Ala Arg Ile Phe Phe Pro Thr Ala Phe Cys Leu Phe
 450 455 460
 Asn Leu Val Tyr Trp Val Ser Tyr Leu Tyr Leu
 465 470 475

<210> 53
 <211> 1602
 <212> DNA
 <213> Homo sapiens

<400> 53
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 cgaggccggc aggtgggcgt gaagggcaca gaccgccttg tgaatgtctt tctgggcatt 180
 ccatttgccc agccgccact gggccctgac cggttctcag cccacacccc agcacagccc 240
 tgggaggggtg tgcgggatgc cagcactgcg cccccaatgt gcctacaaga cgtgatgaac 300


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<210> 54

<211> 533

<212> PRT

<213> Homo sapiens

<400> 54

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Met Arg Leu His Arg Leu His Ala Arg Pro Ser Ala Val Ala Cys Gly
  1              5              10             15

Leu Leu Leu Leu Leu Met Leu Cys Gly Pro Glu Val Ala Gln Pro Glu
      20              25              30

Val Asp Thr Thr Leu Gly Arg Val Arg Gly Arg Gln Val Gly Val Lys
      35              40              45

Gly Thr Asp Arg Leu Val Asn Val Phe Leu Gly Ile Pro Phe Ala Gln
      50              55              60

Pro Pro Leu Gly Pro Asp Arg Phe Ser Ala Pro His Pro Ala Gln Pro
      65              70              75              80

Trp Glu Gly Val Arg Asp Ala Ser Thr Ala Pro Pro Met Cys Leu Gln
      85              90              95

Asp Val Met Asn Ser Ser Arg Phe Val Leu Asn Gly Lys Gln Gln Ile
      100             105             110

Phe Ser Val Ser Glu Asp Cys Leu Val Leu Asn Val Tyr Ser Pro Ala
      115             120             125

Glu Val Met Val Trp Val His Gly Gly Ala Leu Ile Thr Gly Ala Ala
      130             135             140

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Thr Ser Tyr Asp Gly Ser Ala Leu Ala Ala Tyr Gly Asp Val Val Val
 145 150 155 160
 Val Thr Val Gln Tyr Arg Leu Gly Val Leu Gly Phe Phe Ser Thr Gly
 165 170 175
 Asp Glu His Ala Pro Gly Asn Gln Gly Phe Leu Asp Val Val Ala Ala
 180 185 190
 Leu Arg Trp Val Gln Glu Asn Ile Ala Pro Phe Gly Gly Asp Leu Asn
 195 200 205
 Cys Val Thr Val Phe Gly Gly Ser Ala Gly Gly Ser Ile Ile Ser Gly
 210 215 220
 Leu Val Leu Ser Pro Val Ala Ala Gly Leu Phe His Arg Ala Ile Thr
 225 230 235 240
 Gln Ser Gly Val Ile Thr Thr Pro Gly Ile Ile Asp Ser His Pro Trp
 245 250 255
 Pro Leu Ala Gln Lys Ile Ala Asn Thr Leu Ala Cys Ser Ser Ser Ser
 260 265 270
 Pro Ala Glu Met Val Gln Cys Leu Gln Gln Lys Glu Gly Glu Glu Leu
 275 280 285
 Val Leu Ser Lys Lys Leu Lys Asn Thr Ile Tyr Pro Leu Thr Val Asp
 290 295 300
 Gly Thr Val Phe Pro Lys Ser Pro Lys Glu Leu Leu Lys Glu Lys Pro
 305 310 315 320
 Phe His Ser Val Pro Phe Leu Met Gly Val Asn Asn His Glu Phe Ser
 325 330 335
 Trp Leu Ile Pro Gly Thr Lys Val Met Arg Val Ser Asn Lys Met Ile
 340 345 350
 Met Lys Phe Pro Leu Asn Arg Gln Ala Met Arg Lys Glu Thr Ile Thr
 355 360 365
 Lys Met Leu Trp Ser Thr Arg Thr Leu Leu Glu His Asp Trp Lys Met
 370 375 380
 Leu Arg Asn Arg Met Met Asp Ile Val Gln Asp Ala Thr Phe Val Tyr
 385 390 395 400
 Ala Thr Leu Gln Thr Ala His Tyr His Arg Asp Ala Gly Leu Pro Val
 405 410 415
 Tyr Leu Tyr Glu Phe Glu His His Ala Arg Gly Ile Ile Val Lys Pro
 420 425 430
 Arg Thr Asp Gly Ala Asp His Gly Asp Glu Met Tyr Phe Leu Phe Gly
 435 440 445

Gly Pro Phe Ala Thr Gly Leu Ser Met Gly Lys Glu Lys Ala Leu Ser
 450 455 460
 Leu Gln Met Met Lys Tyr Trp Ala Asn Phe Ala Arg Thr Gly Asn Pro
 465 470 475 480
 Asn Asp Gly Asn Leu Pro Cys Trp Pro Arg Tyr Asn Lys Asp Glu Lys
 485 490 495
 Tyr Leu Gln Leu Asp Phe Thr Thr Arg Val Gly Met Lys Leu Lys Glu
 500 505 510
 Lys Lys Met Ala Phe Trp Met Ser Leu Tyr Gln Ser Gln Arg Pro Glu
 515 520 525
 Lys Gln Arg Gln Phe
 530

<210> 55
 <211> 996
 <212> DNA
 <213> Homo sapiens

<400> 55
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 tactcagact gttgcactct aaacctaggg aggttgaaga atgagaccct taggttttaa 180
 cacgaatcct gacaccacca tctatagggt cccaacttgg ttattgtagg caaccttccc 240
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 caccgatccc caccccaatt caatcccgga agggacttac ttaggaaacc cttctttact 360
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 gtgtacatat atattctaca tatatgtata ttaaaactgc actgccatgt ctgccctttt 540
 ttgtggtgtc tagcattaac ttattgtcta ggccagagcg ggggtgggag gggaatgcc 600
 cagtgaaggg agtggcagaa tcaaattgct acatagtcca aacaaaaaag aaggcttttt 660
 caaaaaacat taaattcaca tgcagtctca gagactattt agacaaagtt caagtttagg 720
 gcttttagga tgtgggagta aaactttaat gggaggggag ggctggctgc tggaagaagg 780
 aagaagccag actggttaga cagtactctt aactcctagc ccagcctagc gtgccctgcc 840
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 gagatacttg tagaattggg tgggggaatt cgagag 996

<210> 56
 <211> 74
 <212> PRT
 <213> Homo sapiens

<400> 56
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 20 25 30
 Thr Val Lys Gly Val Ala Glu Ser Asn Cys Tyr Ile Val Gln Thr Lys

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Asn Asp Cys Glu Asp Asp Ser Asp Glu Gln Asp Cys Pro Pro Arg Glu
          35          40          45
Cys Glu Glu Asp Glu Phe Pro Cys Gln Asn Gly Tyr Cys Ile Arg Ser
          50          55          60

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Leu	Trp	His	Cys	Asp	Gly	Asp	Asn	Asp	Cys	Gly	Asp	Asn	Ser	Asp	Glu	65	70	75	80
Gln	Cys	Asp	Met	Arg	Lys	Cys	Ser	Asp	Lys	Glu	Phe	Arg	Cys	Ser	Asp	85	90		95
Gly	Ser	Cys	Ile	Ala	Glu	His	Trp	Tyr	Cys	Asp	Gly	Asp	Thr	Asp	Cys	100	105		110
Lys	Asp	Gly	Ser	Asp	Glu	Glu	Asn	Cys	Pro	Ser	Ala	Val	Pro	Ala	Pro	115	120		125
Pro	Cys	Asn	Leu	Glu	Glu	Phe	Gln	Cys	Ala	Tyr	Gly	Arg	Cys	Ile	Leu	130	135		140
Asp	Ile	Tyr	His	Cys	Asp	Gly	Asp	Asp	Asp	Cys	Gly	Asp	Trp	Ser	Asp	145	150	155	160
Glu	Ser	Asp	Cys	Cys	Glu	Tyr	Ser	Gly	Gln	Leu	Gly	Ala	Ser	His	Gln	165	170		175
Pro	Cys	Arg	Ser	Gly	Glu	Phe	Met	Cys	Asp	Ser	Gly	Leu	Cys	Ile	Asn	180	185		190
Ala	Gly	Trp	Arg	Cys	Asp	Gly	Asp	Ala	Asp	Cys	Asp	Asp	Gln	Ser	Asp	195	200		205
Glu	Arg	Asn	Cys	Thr	Thr	Ser	Met	Cys	Thr	Ala	Glu	Gln	Phe	Arg	Cys	210	215	220	
His	Ser	Gly	Arg	Cys	Val	Arg	Leu	Ser	Trp	Arg	Cys	Asp	Gly	Glu	Asp	225	230	235	240
Asp	Cys	Ala	Asp	Asn	Ser	Asp	Glu	Glu	Asn	Cys	Glu	Asn	Thr	Gly	Ser	245	250		255
Pro	Gln	Cys	Ala	Leu	Asp	Gln	Phe	Leu	Cys	Trp	Asn	Gly	Arg	Cys	Ile	260	265		270
Gly	Gln	Arg	Lys	Leu	Cys	Asn	Gly	Val	Asn	Asp	Cys	Gly	Asp	Asn	Ser	275	280		285
Asp	Glu	Ser	Pro	Gln	Gln	Asn	Cys	Arg	Pro	Arg	Thr	Gly	Glu	Glu	Asn	290	295	300	
Cys	Asn	Val	Asn	Asn	Gly	Gly	Cys	Ala	Gln	Lys	Cys	Gln	Met	Val	Arg	305	310	315	320
Gly	Ala	Val	Gln	Cys	Thr	Cys	His	Thr	Gly	Tyr	Arg	Leu	Thr	Glu	Asp	325	330		335
Gly	His	Thr	Cys	Gln	Asp	Val	Asn	Glu	Cys	Ala	Glu	Glu	Gly	Tyr	Cys	340	345		350
Ser	Gln	Gly	Cys	Thr	Asn	Ser	Glu	Gly	Ala	Phe	Gln	Cys	Trp	Cys	Glu	355	360	365	

Thr Gly Tyr Glu Leu Arg Pro Asp Arg Arg Ser Cys Lys Ala Leu Gly
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 Pro Glu Pro Val Leu Leu Phe Ala Asn Arg Ile Asp Ile Arg Gln Val
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 Leu Pro His Arg Ser Glu Tyr Thr Leu Leu Leu Asn Asn Leu Glu Asn
 405 410 415
 Ala Ile Ala Leu Asp Phe His His Arg Arg Glu Leu Val Phe Trp Ser
 420 425 430
 Asp Val Thr Leu Asp Arg Ile Leu Arg Ala Asn Leu Asn Gly Ser Asn
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 Val Glu Glu Val Val Ser Thr Gly Leu Glu Ser Pro Gly Gly Leu Ala
 450 455 460
 Val Asp Trp Val His Asp Lys Leu Tyr Trp Thr Asp Ser Gly Thr Ser
 465 470 475 480
 Arg Ile Glu Val Ala Asn Leu Asp Gly Ala His Arg Lys Val Leu Leu
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 Trp Gln Asn Leu Glu Lys Pro Arg Ala Ile Ala Leu His Pro Met Glu
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 Gly Thr Ile Tyr Trp Thr Asp Trp Gly Asn Thr Pro Arg Ile Glu Ala
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 Ser Ser Met Asp Gly Ser Gly Arg Arg Ile Ile Ala Asp Thr His Leu
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 Phe Trp Pro Asn Gly Leu Thr Ile Asp Tyr Ala Gly Arg Arg Met Tyr
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 Trp Val Asp Ala Lys His His Val Ile Glu Arg Ala Asn Leu Asp Gly
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 Ser His Arg Lys Ala Val Ile Ser Gln Gly Leu Pro His Pro Phe Ala
 580 585 590
 Ile Thr Val Phe Glu Asp Ser Leu Tyr Trp Thr Asp Trp His Thr Lys
 595 600 605
 Ser Ile Asn Ser Ala Asn Lys Phe Thr Gly Lys Asn Gln Glu Ile Ile
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 Arg Asn Lys Leu His Phe Pro Met Asp Ile His Thr Leu His Pro Gln
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 Arg Gln Pro Ala Gly Lys Asn Arg Cys Gly Asp Asn Asn Gly Gly Cys
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 Thr His Leu Cys Leu Pro Ser Gly Gln Asn Tyr Thr Cys Ala Cys Pro
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Thr	Gly	Phe	Arg	Lys	Ile	Ser	Ser	His	Ala	Cys	Ala	Gln	Ser	Leu	Asp	675	680	685
Lys	Phe	Leu	Leu	Phe	Ala	Arg	Arg	Met	Asp	Ile	Arg	Arg	Ile	Ser	Phe	690	695	700
Asp	Thr	Glu	Asp	Leu	Ser	Asp	Asp	Val	Ile	Pro	Leu	Ala	Asp	Val	Arg	705	710	715
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Ala	Ile	Asp	Trp	Val	Thr	Asn	Lys	Leu	Tyr	Trp	Thr	Asp	Ala	Gly	Thr	770	775	780
Asp	Arg	Ile	Glu	Val	Ala	Asn	Thr	Asp	Gly	Ser	Met	Arg	Thr	Val	Leu	785	790	795
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Tyr	Trp	Ala	Asp	Ala	Gly	Met	Lys	Thr	Ile	Glu	Phe	Ala	Gly	Leu	Asp	865	870	875
Gly	Ser	Lys	Arg	Lys	Val	Leu	Ile	Gly	Ser	Gln	Leu	Pro	His	Pro	Phe	885	890	895
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Lys	Ser	Ile	Gln	Ser	Ala	Asp	Arg	Leu	Thr	Gly	Leu	Asp	Arg	Glu	Thr	915	920	925
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Arg	Arg	Pro	Pro	Val	Ser	Thr	Pro	Cys	Ala	Met	Glu	Asn	Gly	Gly	Cys	945	950	955
Ser	His	Leu	Cys	Leu	Arg	Ser	Pro	Asn	Pro	Ser	Gly	Phe	Ser	Cys	Thr	965	970	975

Cys Pro Thr Gly Ile Asn Leu Leu Ser Asp Gly Lys Thr Cys Ser Pro
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 995 1000 1005
 Val Ser Leu Asp Ile Pro Tyr Phe Ala Asp Val Val Val Pro Ile Asn
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 Ile Thr Met Lys Asn Thr Ile Ala Ile Gly Val Asp Pro Gln Glu Gly
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 Lys Val Tyr Trp Ser Asp Ser Thr Leu His Arg Ile Ser Arg Ala Asn
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 Thr Asp Gly Leu Ala Val Asp Ala Ile Gly Arg Lys Val Tyr Trp Thr
 1075 1080 1085
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 Arg Lys Val Leu Val Trp Gln Asn Leu Asp Ser Pro Arg Ala Ile Val
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 Ala Lys Leu Glu Arg Ser Gly Met Asp Gly Ser Asp Arg Ala Val Leu
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 Leu Ser Glu His Val Thr Ser Gly Thr Lys Met Gly Leu Ile Phe Glu
 35 40 45
 Gly Gly Phe Leu Gly Ile Asn Met Glu Ile Thr Gly Pro Lys Asn Lys
 50 55 60
 Arg Ile Tyr Lys Gly Asp Lys Glu Ser Ser Gly Lys Tyr Thr Phe Ser
 65 70 75 80
 Ala His Met Asp Gly Thr Asn Thr Phe Cys Phe Ser Asp Arg Val Ser
 85 90 95
 Thr Met Thr Pro Lys Ile Val Ile Phe Thr Ile Asp Ile Gly Glu Ala
 100 105 110
 Thr Lys Arg Glu Asp Met Glu Thr Glu Ala His Gln Asn Lys Leu Glu
 115 120 125
 Glu Met Ile Ser Glu Leu Ala Val Ala Met Thr Ala Val Gln His Lys
 130 135 140
 Glu Glu Tyr Thr Lys Ile Trp Glu Arg Ile His Arg Ala Ile Ser Asp
 145 150 155 160
 Asn Thr Asn Ser Pro Val Val Leu Arg Cys Phe Phe Glu Ala Leu Val
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 ttcccttgca cgcgccttcc gtgcacgggc gtggtggact gctacgtgtc gcggcccaca 540
 gagaagtccc tgctgatgct gttcctctgg gcggtcagcg cgctgtcttt tctgctgggc 600
 ctgcgcgacc tgggtctgcag cctgcggcgg cggtatgcga ggaggccggg accccccaca 660
 agccccctca tccggaagca gagcggagcc tcaggccacg cggagggacg ccggactgac 720
 gaggagggtg ggcgggagga agagggggca ccggcgcccc cgggtgcacg cgccggaggg 780
 gagggggctg gcagccccag gcgtacatcc aggggtgtcag ggcacacgaa gattccggat 840
 gaggatgaga gtgaggtgac atcctccgcc agcgaaaagc tgggcagaca gccccggggc 900
 aggccccacc gagaggccgc ccaggacccc agggggtcag gatccgagga gcagccctca 960
 gcagccccca gccgcctggc cgcgccccct tcctgcagca gcctgcagcc ccctgacctg 1020
 cctgccagct ccagtgggtg tccccacctg agagccagga agtctgagtg ggtgtgaaaa 1080
 aaacagcacc tggcggtgcc ccggggctca cgcctgtaat 1120

<210> 64
 <211> 356
 <212> PRT
 <213> Homo sapiens

<400> 64
 Met Pro Ala Ser Ser Leu Pro Gly Lys Leu Trp Phe Val Leu Thr Met
 1 5 10 15
 Leu Leu Arg Met Leu Val Ile Val Leu Ala Gly Arg Pro Val Tyr Gln
 20 25 30
 Asp Glu Gln Glu Arg Phe Val Cys Asn Thr Leu Gln Pro Gly Cys Ala
 35 40 45
 Asn Val Cys Tyr Asp Val Phe Ser Pro Val Ser His Leu Arg Phe Trp
 50 55 60
 Leu Ile Gln Gly Val Cys Val Leu Leu Pro Ser Ala Val Phe Ser Val
 65 70 75 80
 Tyr Val Leu His Arg Gly Ala Thr Leu Ala Ala Leu Gly Pro Arg Arg
 85 90 95
 Cys Pro Asp Pro Arg Glu Pro Ala Ser Gly Gln Arg Arg Cys Pro Arg
 100 105 110

Pro Phe Gly Glu Arg Gly Gly Leu Gln Val Pro Asp Phe Ser Ala Gly
 115 120 125
 Tyr Ile Ile His Leu Leu Leu Arg Thr Leu Leu Glu Ala Ala Phe Gly
 130 135 140
 Ala Leu His Tyr Phe Leu Phe Gly Phe Leu Ala Pro Lys Lys Phe Pro
 145 150 155 160
 Cys Thr Arg Pro Pro Cys Thr Gly Val Val Asp Cys Tyr Val Ser Arg
 165 170 175
 Pro Thr Glu Lys Ser Leu Leu Met Leu Phe Leu Trp Ala Val Ser Ala
 180 185 190
 Leu Ser Phe Leu Leu Gly Leu Ala Asp Leu Val Cys Ser Leu Arg Arg
 195 200 205
 Arg Met Arg Arg Arg Pro Gly Pro Pro Thr Ser Pro Ser Ile Arg Lys
 210 215 220
 Gln Ser Gly Ala Ser Gly His Ala Glu Gly Arg Arg Thr Asp Glu Glu
 225 230 235 240
 Gly Gly Arg Glu Glu Glu Gly Ala Pro Ala Pro Pro Gly Ala Arg Ala
 245 250 255
 Gly Gly Glu Gly Ala Gly Ser Pro Arg Arg Thr Ser Arg Val Ser Gly
 260 265 270
 His Thr Lys Ile Pro Asp Glu Asp Glu Ser Glu Val Thr Ser Ser Ala
 275 280 285
 Ser Glu Lys Leu Gly Arg Gln Pro Arg Gly Arg Pro His Arg Glu Ala
 290 295 300
 Ala Gln Asp Pro Arg Gly Ser Gly Ser Glu Glu Gln Pro Ser Ala Ala
 305 310 315 320
 Pro Ser Arg Leu Ala Ala Pro Pro Ser Cys Ser Ser Leu Gln Pro Pro
 325 330 335
 Asp Pro Pro Ala Ser Ser Ser Gly Ala Pro His Leu Arg Ala Arg Lys
 340 345 350
 Ser Glu Trp Val
 355

<210> 65
 <211> 1234
 <212> DNA
 <213> Homo sapiens

<400> 65
 taataatcctt tttttaaaac tccctaacag gatgtgtggc aggttcctga ggtgggtggct 60
 gctggcggag gagagctggc actccacccc cgtggggcgc ctctgtttc cgtgctcct 120

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gggattccgc cttgtgctgc tggctgccag tgggcctgga gtctatggcg atgagcagag 180
tgaattcgtg tgtcacaccc agcagccggg ctgcaaggct gcctgcttcg atgccttcca 240
cccgtctctc ccgctgcgtt tctgggtctt ccaggctatc ttggtggctg tacctagcgt 300
cctctacatg ggtttcactc tgtatcacgt gatctggcac tgggaagaat caagaaaggg 360
gacggaggaa gaggacaccc tgatccaggg aggggagagc agcagagata ccccaggggc 420
tggaagcctc aggctgctcc gagcttatgt ggctcagctg ggagctcagc tggtcctgga 480
ggggacagcg ccggggttgc agtaccacct gtatgggttc cagatgccca gtccttttgc 540
atgtggccaa gagccttgcc cgtatagatt aacttgccacc ttttcccacc cctcggagaa 600
gatcatcttt ctaaaagcca tgtttggggt cagtgggttc cgtctcttgt tcaactcttt 660
ggagattgtg cttctgggtc tgggaagact gtgtaagccc ctgcggaact tcctgggttg 720
ggcctcttcc tccagccacg ccctggccct gagcagcaaa aggaacctcc agcagacact 780
gggagccatc catcggcctg gtcagccttg ttccatttca gagaccatgt tccccacagc 840
cccagtgact aggggtgaca tctcccagcc tccccacct gtggatatgg ccaagtcgag 900
gtaccggtta accaaagatg ctgaaggagt gaagaaccag ccatccccta atacgcagga 960
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aactgggcca gacacggtgg ctcatgcctg taatcccagc attttgggag gcctaggcag 1080
gtggatcact ggaggtcagg agttcaagac cagccaggcc aacatggtga aaccctgtgc 1140
tactaaaact acaaaaattc tgggcatggt ggtgggcgtc tgtaatccca gctacttgag 1200
aggctgagggc aggagaattg cttgaacctg ggag                                     1234

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<210> 66
 <211> 391
 <212> PRT
 <213> Homo sapiens

```

<400> 66
Met Cys Gly Arg Phe Leu Arg Trp Trp Leu Leu Ala Glu Glu Ser Trp
  1             5             10            15

His Ser Thr Pro Val Gly Arg Leu Leu Phe Pro Val Leu Leu Gly Phe
      20             25            30

Arg Leu Val Leu Leu Ala Ala Ser Gly Pro Gly Val Tyr Gly Asp Glu
      35             40            45

Gln Ser Glu Phe Val Cys His Thr Gln Gln Pro Gly Cys Lys Ala Ala
      50             55            60

Cys Phe Asp Ala Phe His Pro Leu Ser Pro Leu Arg Phe Trp Val Phe
      65             70            75            80

Gln Val Ile Leu Val Ala Val Pro Ser Val Leu Tyr Met Gly Phe Thr
      85             90            95

Leu Tyr His Val Ile Trp His Trp Glu Glu Ser Arg Lys Gly Thr Glu
      100            105            110

Glu Glu Asp Thr Leu Ile Gln Gly Gly Glu Ser Ser Arg Asp Thr Pro
      115            120            125

Gly Ala Gly Ser Leu Arg Leu Leu Arg Ala Tyr Val Ala Gln Leu Gly
      130            135            140

Ala Gln Leu Val Leu Glu Gly Thr Ala Pro Gly Leu Gln Tyr His Leu
      145            150            155            160

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Tyr Gly Phe Gln Met Pro Ser Ser Phe Ala Cys Gly Gln Glu Pro Cys
 165 170 175
 Pro Tyr Arg Leu Thr Cys Thr Phe Ser His Pro Ser Glu Lys Ile Ile
 180 185 190
 Phe Leu Lys Ala Met Phe Gly Val Ser Gly Phe Arg Leu Leu Phe Thr
 195 200 205
 Leu Leu Glu Ile Val Leu Leu Gly Leu Gly Arg Leu Cys Lys Pro Leu
 210 215 220
 Arg Asn Phe Leu Gly Gly Ala Ser Ser Ser Ser His Ala Leu Ala Leu
 225 230 235 240
 Ser Ser Lys Arg Asn Leu Gln Gln Thr Leu Gly Ala Ile His Arg Pro
 245 250 255
 Gly Gln Pro Cys Ser Ile Ser Glu Thr Met Phe Pro Thr Ala Pro Val
 260 265 270
 Thr Arg Gly Asp Ile Ser Arg Pro Pro Pro Pro Val Asp Met Ala Lys
 275 280 285
 Ser Arg Tyr Arg Leu Thr Lys Asp Ala Glu Gly Val Lys Asn Gln Pro
 290 295 300
 Ser Pro Asn Thr Gln Asp Gly Tyr Ile Asp Tyr Val Lys Leu Lys Thr
 305 310 315 320
 Leu Glu Lys Leu Leu Ser Gln Lys Ala Ile Thr Gly Pro Asp Thr Val
 325 330 335
 Ala His Ala Cys Asn Pro Ser Ile Leu Gly Gly Leu Gly Arg Trp Ile
 340 345 350
 Thr Gly Gly Gln Glu Phe Lys Thr Ser Gln Ala Asn Met Val Lys Pro
 355 360 365
 Val Ser Thr Lys Thr Thr Lys Ile Leu Gly Met Val Val Gly Val Cys
 370 375 380
 Asn Pro Ser Tyr Leu Arg Gly
 385 390

<210> 67
 <211> 1400
 <212> DNA
 <213> Homo sapiens

<400> 67
 attctcccca aacgccaggg atgggggtca tggctccccg aaccctcctc ctgctgctct 60
 tggggggccct ggccctgacc gagacctggg ccggtgagtg cggggtcggg agggaaaggg 120
 cctctgcggg gagaagcgag tggcccggc ggcccgggga gccgcgcctc agcctctcct 180
 cgcctccagg ctccactcc ttgaggtatt tcagcaccgc agtgtcccag cccggccgcg 240
 gggagccccg gttcatcgcc gtgggctacg tggacgacac agagtctctg cggttcgaca 300

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gcgactccgt gagtccgagg atggagcggc gggcgccgtg ggtggagcag gaggggctgg 360
agtattggga ccaggagaca cggaacgcca agggccacgc gcagatttac cgagtgaacc 420
tgcggaacct gtcctgctat tacaaccaga gcgaggccgg tggttctcac accatccaga 480
ggaagcatga ctgcgacgtg ggcccgcacag gcgggcccga caggcgccctc ctccgcaggt 540
atgaacagtt cgcctacgat ggcaaggatt acatcgccct gaacgaggac ctgccctcct 600
ggaccgccgc gaacacagcg gctcagatct ccagcacaa gtgggaagcg gacaaatact 660
cagagcaggt cagggcctac ctgagggcaa gtgcatggag tggcgagggc aagtgcattg 720
agtggctccg cagacacctg gagaacggga aggagacgct gcagcgcgcg tcagatcccc 780
caaaggcaca tgtgacctag caccctgtct ctgacctga ggccaccctt gaggtgctgg 840
gccctgggcc tctacccttg aggtgctggg ccctgggctt ctaccctgcg gagatcacac 900
tgacctggca gcaggatggg gaggaccaga ccaggacac ggagcttggt gagaccaggc 960
ctgcagggga cggaaccttc cagaagtggg tggctgtagt ggtgccttcc ggagaggagc 1020
agagatacat gtgccatgtg cagcatgagg ggctgccaga gcccctcacc ctgagatggc 1080
cctcacctcc ctctccttcc ccagagccgt cttctcagcc caccatcccc atcgtgggca 1140
tcgttgctgg cctgtttctc cttggagctg tggctactgg agctgtgggt gctgctgtga 1200
tgaagaggaa gaaaagctca ggtagggaag ggtgagagg tgggatctgg gttttcttgt 1260
tccactgtgg gtttcaagcc acaggtagaa ttgtgacttg cttcatcact gggaagcacc 1320
gtccacacac aggccgacct agcctggggc cctgtgtgccc aacacttgct cttttgtgaa 1380
gcacatgtga aaacgaagga                                     1400

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<210> 68
 <211> 452
 <212> PRT
 <213> Homo sapiens

```

<400> 68
Met Gly Val Met Ala Pro Arg Thr Leu Leu Leu Leu Leu Gly Ala
  1              5              10              15

Leu Ala Leu Thr Glu Thr Trp Ala Gly Glu Cys Gly Val Gly Arg Glu
      20              25              30

Arg Ala Ser Ala Gly Arg Ser Glu Trp Pro Ala Arg Pro Gly Glu Pro
      35              40              45

Arg Leu Ser Leu Ser Ser Pro Pro Gly Ser His Ser Leu Arg Tyr Phe
      50              55              60

Ser Thr Ala Val Ser Gln Pro Gly Arg Gly Glu Pro Arg Phe Ile Ala
      65              70              75              80

Val Gly Tyr Val Asp Asp Thr Glu Phe Val Arg Phe Asp Ser Asp Ser
      85              90              95

Val Ser Pro Arg Met Glu Arg Arg Ala Pro Trp Val Glu Gln Glu Gly
      100             105             110

Leu Glu Tyr Trp Asp Gln Glu Thr Arg Asn Ala Lys Gly His Ala Gln
      115             120             125

Ile Tyr Arg Val Asn Leu Arg Thr Leu Leu Arg Tyr Tyr Asn Gln Ser
      130             135             140

Glu Ala Gly Gly Ser His Thr Ile Gln Arg Lys His Asp Cys Asp Val
      145             150             155             160

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Gly Pro Thr Gly Gly Pro Asp Arg Arg Leu Leu Arg Arg Tyr Glu Gln
 165 170 175
 Phe Ala Tyr Asp Gly Lys Asp Tyr Ile Ala Leu Asn Glu Asp Leu Pro
 180 185 190
 Ser Trp Thr Ala Ala Asn Thr Ala Ala Gln Ile Ser Gln His Lys Trp
 195 200 205
 Glu Ala Asp Lys Tyr Ser Glu Gln Val Arg Ala Tyr Leu Arg Ala Ser
 210 215 220
 Ala Trp Ser Gly Glu Gly Lys Cys Met Glu Trp Leu Arg Arg His Leu
 225 230 235 240
 Glu Asn Gly Lys Glu Thr Leu Gln Arg Ala Ser Asp Pro Pro Lys Ala
 245 250 255
 His Val Thr Gln His Pro Val Ser Asp His Glu Ala Thr Leu Glu Val
 260 265 270
 Leu Gly Pro Gly Pro Leu Pro Leu Arg Cys Trp Ala Leu Gly Leu Tyr
 275 280 285
 Pro Ala Glu Ile Thr Leu Thr Trp Gln Gln Asp Gly Glu Asp Gln Thr
 290 295 300
 Gln Asp Thr Glu Leu Val Glu Thr Arg Pro Ala Gly Asp Gly Thr Phe
 305 310 315 320
 Gln Lys Trp Val Ala Val Val Val Pro Ser Gly Glu Glu Gln Arg Tyr
 325 330 335
 Met Cys His Val Gln His Glu Gly Leu Pro Glu Pro Leu Thr Leu Arg
 340 345 350
 Trp Pro Ser Pro Pro Ser Pro Phe Pro Glu Pro Ser Ser Gln Pro Thr
 355 360 365
 Ile Pro Ile Val Gly Ile Val Ala Gly Leu Phe Leu Leu Gly Ala Val
 370 375 380
 Val Thr Gly Ala Val Val Ala Ala Val Met Lys Arg Lys Lys Ser Ser
 385 390 395 400
 Gly Arg Glu Gly Val Arg Gly Gly Ile Trp Val Phe Leu Phe His Cys
 405 410 415
 Gly Phe Gln Ala Thr Gly Arg Ile Val Thr Cys Phe Ile Thr Gly Lys
 420 425 430
 His Arg Pro His Thr Gly Arg Pro Ser Leu Gly Pro Cys Val Pro Thr
 435 440 445
 Leu Ala Leu Leu
 450

<210> 69
 <211> 1225
 <212> DNA
 <213> Homo sapiens

<400> 69
 acgccgagga tgggggtcatg gcgtcccaaa cctcctcct gctgctcttg ggggccctgg 60
 ccctgaccga gacctgggcg ggtaccact ccataaggta tttcagcacc gccgtgtccc 120
 ggccgggtcg cggggagccc cggggtagcc actccataag gtatttcagc accgccgtgt 180
 cccggccggg tcgcggggag ccccggtaca tcgcagtggg ctacgtggac gacacgcagt 240
 tcgtgcggtt cgacagcgac gcggcgactc cgaggatgga gccgcaggcg ccgtgggttg 300
 agcaggaggg accggagtat tgggaccgga gcacaccgaa catcaggccc gcgcacagac 360
 tgacaagagt gaacctgccc atgccgcgcc gctactacca ccagagcggg tctaacaccc 420
 tccagataat gtatggctgc gacttggggc tgggaaggcg cctcctccgc gggatatgaac 480
 agcacgcaa cgatggcaaa gattacatcg ccctaaacga ggacctgagc tcttgaccg 540
 cggcgcccat ggcggctcag attaccagc gcaagtggga ggcggcccat gaggcggagc 600
 agcagagagc ctacctggag ggcacgtgcg tggagtggct ccgcagatac ctggagaacg 660
 ggaaggagac gctgcagcgc actaccccc cccccaagac acatatgatc caccattccg 720
 tctctgacta taaggccacc ctgagatgct gggccctggg cttctaccct gtggagatca 780
 cactgacctg gcagcaggat ggagaggacc agactcagga catggagctt gtagagacca 840
 ggcctgcagg ggatggaaac ttccagaagt ggcagctgt ggtggtgcct tctggagagg 900
 aacagagata catgtgccat gtgcagcatg aggggttgcc caagcccctc accctgagat 960
 gggagcagtc ttctcagccc accatcccca tcgtgggtat cgttgctggc ctggttctcc 1020
 ttggagctgt agtcaactgga gctgtggttt ctgctgtgat gtgcaggaag aactcatttt 1080
 gttctacccc aggcagcaac catgcgcagg gttctgatgt gtctctcacg gcttgtaaag 1140
 gtgagacgct gggggacctg atgtgtgggg ggtgttgggg gcaatagtgg atgcagctgt 1200
 gctatggggt ttctttgaat tggat 1225

<210> 70
 <211> 389
 <212> PRT
 <213> Homo sapiens

<400> 70
 Met Ala Ser Gln Thr Leu Leu Leu Leu Leu Gly Ala Leu Ala Leu
 1 5 10 15
 Thr Glu Thr Trp Ala Gly Thr His Ser Ile Arg Tyr Phe Ser Thr Ala
 20 25 30
 Val Ser Arg Pro Gly Arg Gly Glu Pro Arg Gly Thr His Ser Ile Arg
 35 40 45
 Tyr Phe Ser Thr Ala Val Ser Arg Pro Gly Arg Gly Glu Pro Arg Tyr
 50 55 60
 Ile Ala Val Gly Tyr Val Asp Asp Thr Gln Phe Val Arg Phe Asp Ser
 65 70 75 80
 Asp Ala Ala Thr Pro Arg Met Glu Pro Gln Ala Pro Trp Leu Glu Gln
 85 90 95
 Glu Gly Pro Glu Tyr Trp Asp Arg Ser Thr Pro Asn Ile Arg Pro Ala
 100 105 110

His Arg Leu Thr Arg Val Asn Leu Pro Met Pro Arg Arg Tyr Tyr His
 115 120 125
 Gln Ser Gly Ser Asn Thr Leu Gln Ile Met Tyr Gly Cys Asp Leu Gly
 130 135 140
 Leu Glu Gly Arg Leu Leu Arg Gly Tyr Glu Gln His Ala Asn Asp Gly
 145 150 155 160
 Lys Asp Tyr Ile Ala Leu Asn Glu Asp Leu Ser Ser Trp Thr Ala Ala
 165 170 175
 Ala Met Ala Ala Gln Ile Thr Gln Arg Lys Trp Glu Ala Ala His Glu
 180 185 190
 Ala Glu Gln Gln Arg Ala Tyr Leu Glu Gly Thr Cys Val Glu Trp Leu
 195 200 205
 Arg Arg Tyr Leu Glu Asn Gly Lys Glu Thr Leu Gln Arg Thr Thr Pro
 210 215 220
 Pro Pro Lys Thr His Met Ile His His Ser Val Ser Asp Tyr Lys Ala
 225 230 235 240
 Thr Leu Arg Cys Trp Ala Leu Gly Phe Tyr Pro Val Glu Ile Thr Leu
 245 250 255
 Thr Trp Gln Gln Asp Gly Glu Asp Gln Thr Gln Asp Met Glu Leu Val
 260 265 270
 Glu Thr Arg Pro Ala Gly Asp Gly Asn Phe Gln Lys Trp Ala Ala Val
 275 280 285
 Val Val Pro Ser Gly Glu Glu Gln Arg Tyr Met Cys His Val Gln His
 290 295 300
 Glu Gly Leu Pro Lys Pro Leu Thr Leu Arg Trp Glu Gln Ser Ser Gln
 305 310 315 320
 Pro Thr Ile Pro Ile Val Gly Ile Val Ala Gly Leu Val Leu Leu Gly
 325 330 335
 Ala Val Val Thr Gly Ala Val Val Ser Ala Val Met Cys Arg Lys Asn
 340 345 350
 Ser Phe Cys Ser Thr Pro Gly Ser Asn His Ala Gln Gly Ser Asp Val
 355 360 365
 Ser Leu Thr Ala Cys Lys Gly Glu Thr Leu Gly Asp Leu Met Cys Gly
 370 375 380
 Gly Cys Trp Gly Gln
 385

<210> 71
 <211> 1159

<212> DNA

<213> Homo sapiens

<400> 71

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tctccccaga cgccgaggat ggtgctcatg gcgccccgaa ccctcctcct gctgctctca 60
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tcccgggccc gccgcgggga gccccgcttc atctccgtcg gctacgtgga ctatacgag 180
ttcgtgcggt tcgacagcga cgacgcgagt ccgagagagg agccgcgggc gccgtggatg 240
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gggtatgaac agcacgccta cgacggcaag gattacatcg ctctgaacga ggacctgcgc 480
tcctggaccg cggcggacat ggcagctcag atcaccaagc gcaagtggga ggcggcccgt 540
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ctggagaacg ggaaggagac gctgcagcgc gcgtcagacc cccccaagac acatatgacc 660
cactacccca tctctgacca tgaggccacc ctgaggtgct gggccctggg cttctaccct 720
gcggagatca cactgacctg gcagcgggat ggggaggacc agaccacgga gctcgtggag 780
accaggcctg caggggatgg aaccttcagg aagtgggcgg ctgtggtggt gccttctgga 840
gaggagcaga gatacacctg ccatgtgcag catgagggtc tgcccagacc cctcaccctg 900
agatggcagg gtcaggggtcc ctcaccttcc ccccttttcc cagagccatc ttcccagccc 960
accatcccca tcgtgggcat cattgctggc ctgggttctac ttgtagctgt ggtcactgga 1020
gctgtggtca ctgctgtaat gtggaggaag aagagctcag gtaaggaagg ggatgggtat 1080
tctactccag gcggcaacag tgcccagggc tctgatgtgt ctctcacggc gtgaaagggtg 1140
agaccttggg gggcctgat                                     1159
```

<210> 72

<211> 371

<212> PRT

<213> Homo sapiens

<400> 72

```
Met Val Leu Met Ala Pro Arg Thr Leu Leu Leu Leu Leu Ser Gly Ala
  1                      5                      10                      15

Leu Thr Gln Thr Trp Ala Arg Ser His Ser Met Arg Tyr Phe Tyr Thr
      20                      25                      30

Thr Met Ser Arg Pro Gly Arg Gly Glu Pro Arg Phe Ile Ser Val Gly
      35                      40                      45

Tyr Val Asp Tyr Thr Gln Phe Val Arg Phe Asp Ser Asp Asp Ala Ser
      50                      55                      60

Pro Arg Glu Glu Pro Arg Ala Pro Trp Met Glu Arg Glu Gly Pro Glu
      65                      70                      75                      80

Tyr Trp Asp Arg Asn Thr Gln Ile Cys Lys Ala Gln Ala Arg Thr Glu
      85                      90                      95

Arg Glu Asn Leu Arg Ile Ala Leu Arg Tyr Tyr Asn Gln Ser Glu Gly
      100                      105                      110

Gly Gly Ser His Thr Met Gln Val Met Tyr Gly Cys Asp Val Gly Pro
      115                      120                      125

Asp Gly Arg Phe Leu Arg Gly Tyr Glu Gln His Ala Tyr Asp Gly Lys
```

130	135	140
Asp Tyr Ile Ala Leu Asn Glu Asp Leu Arg Ser Trp Thr Ala Ala Asp 145 150 155 160		
Met Ala Ala Gln Ile Thr Lys Arg Lys Trp Glu Ala Ala Arg Val Ala 165 170 175		
Glu Gln Leu Arg Ala Tyr Leu Glu Gly Glu Phe Val Glu Trp Leu Arg 180 185 190		
Arg Tyr Leu Glu Asn Gly Lys Glu Thr Leu Gln Arg Ala Ser Asp Pro 195 200 205		
Pro Lys Thr His Met Thr His Tyr Pro Ile Ser Asp His Glu Ala Thr 210 215 220		
Leu Arg Cys Trp Ala Leu Gly Phe Tyr Pro Ala Glu Ile Thr Leu Thr 225 230 235 240		
Trp Gln Arg Asp Gly Glu Asp Gln Thr Thr Glu Leu Val Glu Thr Arg 245 250 255		
Pro Ala Gly Asp Gly Thr Phe Gln Lys Trp Ala Ala Val Val Val Pro 260 265 270		
Ser Gly Glu Glu Gln Arg Tyr Thr Cys His Val Gln His Glu Gly Leu 275 280 285		
Pro Glu Pro Leu Thr Leu Arg Trp Gln Gly Gln Gly Pro Ser Pro Ser 290 295 300		
Pro Leu Phe Pro Glu Pro Ser Ser Gln Pro Thr Ile Pro Ile Val Gly 305 310 315 320		
Ile Ile Ala Gly Leu Val Leu Leu Val Ala Val Val Thr Gly Ala Val 325 330 335		
Val Thr Ala Val Met Trp Arg Lys Lys Ser Ser Gly Lys Glu Gly Asp 340 345 350		
Gly Tyr Ser Thr Pro Gly Gly Asn Ser Ala Gln Gly Ser Asp Val Ser 355 360 365		
Leu Thr Ala 370		

<210> 73
 <211> 565
 <212> DNA
 <213> Homo sapiens

<400> 73
 aggggaagca tgagacggct gcggatctcg ctggccccgt ggggtgggcgc gggggacgcg 60
 ggagggggccg agctcacggg gccagcgccg gggcctgcag gtggccctgg aggaatctgc 120
 aagcaccgcg ccgtgcagcg ggccttccgg gagaccagtg tggacagcgc cctggacacg 180

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cccttcccag ctggaacatc tgtgaggctg gaatttaagc tccggcagac aagcggctgg 240
aggaaggcct ggaagaaacc caagtgcaaa gccagcccg agaggaggaa acagaaatgc 300
ctgacctgcg tcaaaatgga ctgtgaggat aaggttctgg gcaggatggt tcgctgccct 360
ccagagacgc agactcggcg ggagcctgag gagcaccagg gggccgggtg cagcccggcg 420
gagcggggcg ggaggacccc acggcgggag gggcggggag gacccacgg ctgccgcttc 480
cctgcacggt tcgcctcctc caaggcccg cccccagcgg agccctagcg ctgaatcgca 540
tggcgcccc tggagccctg gcggg 565

```

<210> 74
 <211> 172
 <212> PRT
 <213> Homo sapiens

```

<400> 74
Met Arg Arg Leu Arg Ile Ser Leu Ala Pro Trp Val Gly Ala Gly Asp
  1             5             10             15

Ala Gly Gly Ala Glu Leu Thr Gly Pro Ala Pro Gly Pro Ala Gly Gly
      20             25             30

Pro Gly Gly Ile Cys Lys His Pro Pro Val Gln Arg Ala Phe Arg Glu
      35             40             45

Thr Ser Val Asp Ser Ala Leu Asp Thr Pro Phe Pro Ala Gly Thr Ser
      50             55             60

Val Arg Leu Glu Phe Lys Leu Arg Gln Thr Ser Gly Trp Arg Lys Ala
      65             70             75             80

Trp Lys Lys Pro Lys Cys Lys Ala Gln Pro Glu Arg Arg Lys Gln Lys
      85             90             95

Cys Leu Thr Cys Val Lys Met Asp Cys Glu Asp Lys Val Leu Gly Arg
      100            105            110

Met Val Arg Cys Pro Pro Glu Thr Gln Thr Arg Arg Glu Pro Glu Glu
      115            120            125

His Gln Gly Ala Gly Cys Ser Pro Ala Glu Arg Ala Gly Arg Thr Pro
      130            135            140

Arg Arg Ser Gly Arg Gly Gly Pro His Gly Cys Arg Phe Pro Ala Arg
      145            150            155            160

Phe Ala Ser Ser Lys Ala Arg Pro Pro Ala Glu Pro
      165            170

```

<210> 75
 <211> 1706
 <212> DNA
 <213> Homo sapiens

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<400> 75
ctgccaagat ggcgtcggcc tcttcccaac cgtcggtggc ggtcggtttt tcatcctttg 60
atcccggggc cccttcctgt accgcgtcct cagcatctgg aatcttgagc cccacggcat 120

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ctgaggtgcc ttatgcctct ggcatgcccc tcaagaaaac aggccatcga ggtgtcgatt 180
cctcaggaga gacaacatat aaaaagacaa cctcaacagc cttgaaaggt gccatccagt 240
taggcattac ttacactgtg gggagcctga gtaccaaacc agagcgtgat gtcctcatgc 300
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actacttgaa cctcagccag aaccctcgga ctttgcctgc taaattcttt ggactgtact 660
gtgtgcagac aggtggcaag aacattcgga ttgtggtgat gaacaatctt ttaccaagat 720
ccgtcaaaat gcatatcaaa tatgacctca aaggctcaac ctacaaacgc cgggcttccc 780
agaaagagcg agagaagcct cttcccatat ttaaagatct agacttctta caagacatcc 840
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aggctcggct gggcgacacc atggaggccg atgaccatat ggggtggcatc cctgctcaga 1140
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aacacaagtc acaagtgata aaggtgcaag tggagccagg tgttcacctt ggtcgttctg 1500
atgttttacc tcagacctca gaatccacct ttggaggaaa tcagygaggg ctcactatta 1560
ctgaccacag tttctcacct gtagttggaa agactttgca tatgctaact acaagtataa 1620
ccttgaaaaa acttgaatgt acagagtcag agttcaccca ttaagcgcaa agcctcagaa 1680
gacctggaac aagattctgc ttctct 1706

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<210> 76
<211> 551
<212> PRT
<213> Homo sapiens

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<400> 76
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  1             5             10             15

Phe Asp Pro Gly Ala Pro Ser Cys Thr Ala Ser Ser Ala Ser Gly Ile
  20             25             30

Leu Ser Pro Thr Ala Ser Glu Val Pro Tyr Ala Ser Gly Met Pro Ile
  35             40             45

Lys Lys Thr Gly His Arg Gly Val Asp Ser Ser Gly Glu Thr Thr Tyr
  50             55             60

Lys Lys Thr Thr Ser Thr Ala Leu Lys Gly Ala Ile Gln Leu Gly Ile
  65             70             75             80

Thr Tyr Thr Val Gly Ser Leu Ser Thr Lys Pro Glu Arg Asp Val Leu
  85             90             95

Met Gln Asp Phe Tyr Val Val Glu Ser Ile Phe Phe Pro Ser Glu Gly
 100             105             110

Ser Asn Leu Thr Pro Ala His His Tyr Asn Ala Phe Arg Phe Lys Thr

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115					120					125					
Tyr	Ala	Pro	Val	Ala	Phe	Arg	Tyr	Phe	Arg	Glu	Leu	Phe	Gly	Ile	Pro
130						135					140				
Pro	Asp	Asp	Tyr	Leu	Cys	Ser	Leu	Cys	Ser	Glu	Pro	Leu	Ile	Glu	Leu
145					150					155					160
Cys	Ser	Ser	Gly	Ala	Ser	Gly	Ser	Leu	Phe	Tyr	Val	Ser	Ser	Asp	Asp
				165					170					175	
Glu	Leu	Ile	Ile	Lys	Thr	Leu	Gln	His	Lys	Glu	Ala	Glu	Phe	Leu	Gln
			180					185					190		
Lys	Leu	Leu	Pro	Gly	Tyr	Tyr	Leu	Asn	Leu	Ser	Gln	Asn	Pro	Arg	Thr
			195				200					205			
Leu	Leu	Pro	Lys	Phe	Phe	Gly	Leu	Tyr	Cys	Val	Gln	Thr	Gly	Gly	Lys
			210			215					220				
Asn	Ile	Arg	Ile	Val	Val	Met	Asn	Asn	Leu	Leu	Pro	Arg	Ser	Val	Lys
225					230					235					240
Met	His	Ile	Lys	Tyr	Asp	Leu	Lys	Gly	Ser	Thr	Tyr	Lys	Arg	Arg	Ala
				245					250					255	
Ser	Gln	Lys	Glu	Arg	Glu	Lys	Pro	Leu	Pro	Thr	Phe	Lys	Asp	Leu	Asp
			260					265					270		
Phe	Leu	Gln	Asp	Ile	Pro	Asp	Gly	Leu	Phe	Leu	Asp	Ala	Asp	Thr	Tyr
			275				280					285			
Asn	Ala	Leu	Cys	Lys	Thr	Leu	Gln	Arg	Asp	Cys	Leu	Val	Leu	Gln	Ser
			290				295					300			
Phe	Lys	Ile	Met	Asp	Tyr	Ser	Leu	Trp	Leu	Ser	Ile	His	Asn	Ile	Asp
305					310					315					320
His	Ala	Gln	Arg	Glu	Pro	Leu	Ser	Ser	Asp	Thr	Leu	Gln	Val	Ser	Ile
				325					330					335	
Asp	Thr	Gln	Arg	Leu	Ala	Pro	Gln	Lys	Ala	Leu	Tyr	Ser	Thr	Ala	Met
				340				345						350	
Glu	Phe	Ile	Gln	Gly	Glu	Ala	Arg	Leu	Gly	Asp	Thr	Met	Glu	Ala	Asp
				355			360					365			
Asp	His	Met	Gly	Gly	Ile	Pro	Ala	Gln	Asn	Ser	Lys	Gly	Glu	Arg	Leu
				370			375				380				
Leu	Leu	Tyr	Ile	Gly	Ile	Ile	Asp	Ile	Leu	Gln	Ser	Tyr	Thr	Phe	Leu
385					390					395					400
Lys	Lys	Leu	Glu	His	Ser	Trp	Lys	Ala	Val	Val	His	Asp	Gly	Asp	Ala
				405					410					415	
Val	Ser	Val	His	Arg	Pro	Gly	Phe	Tyr	Ala	Glu	Arg	Phe	Gln	His	Phe

420	425	430
Met Cys Asn Ala Val Phe Lys Lys Ile Pro Leu Lys Pro Ser Pro Ser		
435	440	445
Lys Lys Phe Arg Ser Gly Leu Ser Phe Ser Leu His Thr Gly Ser Ser		
450	455	460
Gly Asn Ser Cys Ile Thr Tyr Gln Pro Leu Val Ser Glu Glu His Lys		
465	470	480
Ser Gln Val Ile Lys Val Gln Val Glu Pro Gly Val His Leu Gly Arg		
485	490	495
Ser Asp Val Leu Pro Gln Thr Ser Glu Ser Thr Phe Gly Gly Asn Gln		
500	505	510
Gly Gly Leu Thr Ile Thr Asp His Ser Phe Ser Pro Val Val Gly Lys		
515	520	525
Thr Leu His Met Leu Thr Thr Ser Ile Thr Leu Glu Lys Leu Glu Cys		
530	535	540
Thr Glu Ser Glu Phe Thr His		
545	550	

<210> 77

<211> 1316

<212> DNA

<213> Homo sapiens

<400> 77

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ttaatttctt	gagatattac	aaaataaaat	attacagtta	ttgccttatt	cacagtatac	180
aaaggatatt	tatcatacaa	actgttgatc	ctacagggac	tggatcatgga	ggagagtcta	240
tttttggcct	aggattgtat	ggtgatcaag	caagcttttt	tgagacagaa	aacgtcccaa	300
gaattaagca	caagaagaag	ggcacaatgt	ccatggtgaa	taatgacagt	gatcaacatg	360
gatctcagtt	tcttatcact	acaggagaaa	atctagatta	ccttgatggt	acccatacag	420
tatttggtga	ggtgacagaa	ggcattgaca	taattaagaa	aataaatgag	acctttgttg	480
acaaggactt	tgtaccatat	caggatatca	ggataaatta	tatagtgatt	ttagatggtc	540
catttgatga	cattcctgat	ttattaatcc	ctgatcaatc	accagaacct	acaagggaac	600
aattaaagag	tggtagagtt	gacacaaatg	aagaaattga	tcatttcaaa	cgaagggtcag	660
ccgaagaagt	agaagaaata	aaggcagaaa	aagaagctaa	aactcaggct	ttacttttag	720
agatggtggg	agacctacct	gatgcagata	ttaaacctcc	ggaaaaatct	gtgtttgtat	780
gcaaattgaa	tccagtgacc	acagatgagg	atctggatat	aatactctct	agatttgggc	840
caataagaag	ttgtgaagtt	atctgggact	ggaagacagg	agaaatcctc	tgttatttct	900
ttctttcttt	ctatgctttt	attgaatttg	aaaaggaaga	agattatgag	aaagccttct	960
tcaaaatgga	caatatactt	atagatgaca	gaagaaaaca	tggatttgcc	agtctgttac	1020
aaaggttaaa	tgggaaggaaa	aagtgggaaa	tacaccaaca	gccggggcgc	agcccacgcc	1080
gccgccgccg	cccgcaccgt	tcccgctccc	ggcgccggcg	acggcggggc	gggacccccg	1140
ggcgctgcgc	ctcatcctct	gcgacggggg	atgaggggtc	tgagaggaaac	tggaggaggga	1200
ggaggaggag	gcagtggaca	tgggtggctct	gcgggcccctg	gacgccgccg	gccgacacgg	1260
aggcgcgggg	cgggaggcgc	gcgagcgtgt	gggagccggc	gcgatagtgc	gtgcga	1316

<210> 78
 <211> 432
 <212> PRT
 <213> Homo sapiens

<400> 78

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Met Ala Val Leu Leu Glu Thr Thr Val Gly Asn Val Val Val Asn Leu
  1              5              10              15

His Thr Glu Gln Gln Pro Cys Asn Cys Glu Leu Phe Glu Ser Arg Tyr
      20              25              30

His Ser Leu Met Ala Phe Asn Phe Leu Arg Tyr Tyr Lys Ile Lys Tyr
      35              40              45

Tyr Ser Tyr Cys Leu Ile His Ser Ile Gln Arg Tyr Phe Ile Ile Gln
      50              55              60

Thr Val Asp Pro Thr Gly Thr Gly His Gly Gly Glu Ser Ile Phe Gly
      65              70              75              80

Leu Gly Leu Tyr Gly Asp Gln Ala Ser Phe Phe Glu Thr Glu Asn Val
      85              90              95

Pro Arg Ile Lys His Lys Lys Lys Gly Thr Met Ser Met Val Asn Asn
      100             105             110

Asp Ser Asp Gln His Gly Ser Gln Phe Leu Ile Thr Thr Gly Glu Asn
      115             120             125

Leu Asp Tyr Leu Asp Gly Thr His Thr Val Phe Gly Glu Val Thr Glu
      130             135             140

Gly Ile Asp Ile Ile Lys Lys Ile Asn Glu Thr Phe Val Asp Lys Asp
      145             150             155             160

Phe Val Pro Tyr Gln Asp Ile Arg Ile Asn Tyr Ile Val Ile Leu Asp
      165             170             175

Gly Pro Phe Asp Asp Ile Pro Asp Leu Leu Ile Pro Asp Gln Ser Pro
      180             185             190

Glu Pro Thr Arg Glu Gln Leu Lys Ser Gly Arg Val Asp Thr Asn Glu
      195             200             205

Glu Ile Asp His Phe Lys Arg Arg Ser Ala Glu Glu Val Glu Glu Ile
      210             215             220

Lys Ala Glu Lys Glu Ala Lys Thr Gln Ala Leu Leu Leu Glu Met Val
      225             230             235             240

Gly Asp Leu Pro Asp Ala Asp Ile Lys Pro Pro Glu Lys Ser Val Phe
      245             250             255

Val Cys Lys Leu Asn Pro Val Thr Thr Asp Glu Asp Leu Asp Ile Ile
      260             265             270

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Leu Ser Arg Phe Gly Pro Ile Arg Ser Cys Glu Val Ile Trp Asp Trp
 275 280 285
 Lys Thr Gly Glu Ile Leu Cys Tyr Phe Phe Leu Ser Phe Tyr Ala Phe
 290 295 300
 Ile Glu Phe Glu Lys Glu Glu Asp Tyr Glu Lys Ala Phe Phe Lys Met
 305 310 315 320
 Asp Asn Ile Leu Ile Asp Asp Arg Arg Lys His Gly Phe Ala Ser Leu
 325 330 335
 Leu Gln Arg Leu Asn Gly Arg Lys Lys Trp Glu Ile His Gln Gln Pro
 340 345 350
 Gly Arg Ser Pro Arg Arg Arg Arg Arg Pro His Arg Ser Arg Ser Arg
 355 360 365
 Arg Arg Arg Arg Arg Ala Gly Thr Pro Arg Arg Cys Ala Ser Ser Ser
 370 375 380
 Ala Thr Gly Asp Glu Gly Ser Glu Arg Asn Trp Arg Arg Arg Arg Arg
 385 390 395 400
 Arg Gln Trp Thr Trp Trp Leu Cys Gly Pro Trp Thr Pro Pro Ala Asp
 405 410 415
 Thr Glu Ala Arg Gly Gly Arg Arg Ala Ser Val Trp Glu Pro Ala Arg
 420 425 430

<210> 79
 <211> 1647
 <212> DNA
 <213> Homo sapiens

<400> 79
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 ctcgccaccc atcacagcct ggagcactgg catcatctgt actatgggcc cagcttctcc 180
 attgctagag atgctgaaga aaacgattaa gtctggaatt aatgtggctc atctgaactc 240
 tcatggagcc catgagtacc atacagagac catcaagaac gtgcgcacag ccacggaaag 300
 ctttgcttct gactccatcc tctaccagcc cattgctgtg gctccagaca ctaaaggacc 360
 tgagatccca actgggcccg tcaagggcag cggcactgca gaggtggagc tgaagaaggg 420
 agccactctc aagttcacgc tggataatac ctacatggaa aagggtaaag agaacatcct 480
 gtggcgggac tacaagaaca tctgcaaggt ggtggaagtg ggctgcaaga tctacgtgga 540
 tgatgggcta atttctctcc aagtgaagca gaaggatgct cactttcttg tgacagaggt 600
 ggaaaatggg ggctccttgg gcagcaagaa gagtgtgaac cttcctgggg ctgccgtgga 660
 cctgtctgcc atgttgagga aggacatcca ggacctgaag tttgggggcg agcaagatgt 720
 cgatatgatg ttttcatcat tcatctgcaa gacatctgat gtccatgaag ttaggaaggt 780
 cttgggagag aaaggaaaga acagcaagat aaccagcaaa attgagaatc atgatggggg 840
 ttggagggtt gatgaaatcc tggaggccag cgatgggatt atggtagctc gtggtgatcc 900
 accacaagcc gtcgagatgg agattcctgc aggggaaggtc tgccttgctc agaggatgat 960
 gattgggtgg tgcaaccaag ctgggaagcc tgtcatcttt gccactcaga tgctagagga 1020

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 gtgtaaggac cccatccagg agccccaggc tgaggatgtg gacctccgag tgaacttggc 1500
 catgaatgtt ggtaaggccc gaggtttctt caagaaggat gatgtggtca ttgtgtgtgac 1560
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 gactccagag ctcttctcc agccct 1647

<210> 80
 <211> 534
 <212> PRT
 <213> Homo sapiens

<400> 80
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 Gln Leu His Ala Ala Met Ala Asp Thr Phe Leu Glu His Met Cys Cys
 20 25 30
 Leu Asp Thr Asp Ser Pro Pro Ile Thr Ala Trp Ser Thr Gly Ile Ile
 35 40 45
 Cys Thr Met Gly Pro Ala Ser Pro Leu Leu Glu Met Leu Lys Lys Thr
 50 55 60
 Ile Lys Ser Gly Ile Asn Val Ala His Leu Asn Ser His Gly Ala His
 65 70 75 80
 Glu Tyr His Thr Glu Thr Ile Lys Asn Val Arg Thr Ala Thr Glu Ser
 85 90 95
 Phe Ala Ser Asp Ser Ile Leu Tyr Gln Pro Ile Ala Val Ala Pro Asp
 100 105 110
 Thr Lys Gly Pro Glu Ile Pro Thr Gly Pro Val Lys Gly Ser Gly Thr
 115 120 125
 Ala Glu Val Glu Leu Lys Lys Gly Ala Thr Leu Lys Phe Thr Leu Asp
 130 135 140
 Asn Thr Tyr Met Glu Lys Gly Lys Glu Asn Ile Leu Trp Arg Asp Tyr
 145 150 155 160
 Lys Asn Ile Cys Lys Val Val Glu Val Gly Cys Lys Ile Tyr Val Asp
 165 170 175
 Asp Gly Leu Ile Ser Leu Gln Val Lys Gln Lys Asp Ala His Phe Leu
 180 185 190
 Val Thr Glu Val Glu Asn Gly Gly Ser Leu Gly Ser Lys Lys Ser Val
 195 200 205

Asn Leu Pro Gly Ala Ala Val Asp Leu Ser Ala Met Leu Glu Lys Asp
 210 215 220
 Ile Gln Asp Leu Lys Phe Gly Gly Glu Gln Asp Val Asp Met Met Phe
 225 230 235 240
 Ser Ser Phe Ile Cys Lys Thr Ser Asp Val His Glu Val Arg Lys Val
 245 250 255
 Leu Gly Glu Lys Gly Lys Asn Ser Lys Ile Thr Ser Lys Ile Glu Asn
 260 265 270
 His Asp Gly Gly Trp Arg Phe Asp Glu Ile Leu Glu Ala Ser Asp Gly
 275 280 285
 Ile Met Val Ala Arg Gly Asp Pro Pro Gln Ala Val Glu Met Glu Ile
 290 295 300
 Pro Ala Gly Lys Val Cys Leu Ala Gln Arg Met Met Ile Gly Trp Cys
 305 310 315 320
 Asn Gln Ala Gly Lys Pro Val Ile Phe Ala Thr Gln Met Leu Glu Asp
 325 330 335
 Val Ile Lys Lys Leu His Pro Thr Trp Ala Glu Gly Ser Gly Val Ala
 340 345 350
 Asn Ala Val Leu Val Glu Ala Asp Cys Ile Met Leu Ser Gly Glu Thr
 355 360 365
 Ala Lys Gly Asn Tyr Pro Leu Glu Ala Val His Met Gln His Leu Ile
 370 375 380
 Ala Cys Glu Ala Glu Ala Thr Ile Tyr His Leu Glu Leu Phe Glu Glu
 385 390 395 400
 Phe Cys His Leu Ala Pro Ile Thr Ser Asp Pro Ala Glu Ala Thr Ala
 405 410 415
 Met Gly Thr Val Glu Ala Ser Phe Lys Cys Cys Ser Gly Ala Ile Ile
 420 425 430
 Val Leu Thr Lys Ser Ala Arg Cys Ala His Gln Val Ala Arg Tyr Cys
 435 440 445
 Pro Arg Ala Pro Met Ile Val Val Thr Trp His Pro Gln Ala Ala Arg
 450 455 460
 Gln Ala His Leu Tyr Arg Gly Ile Phe Pro Val Leu Cys Lys Asp Pro
 465 470 475 480
 Ile Gln Glu Pro Gln Ala Glu Asp Val Asp Leu Arg Val Asn Leu Ala
 485 490 495
 Met Asn Val Gly Lys Ala Arg Gly Phe Phe Lys Lys Asp Asp Val Val
 500 505 510

Ile Val Leu Thr Trp Gly His Pro Gly Pro Gly Phe Ser Thr Thr Leu
515 520 525

Cys Val Ile Pro Val Leu
530

<210> 81
<211> 600
<212> DNA
<213> Homo sapiens

<400> 81
accaggagcc ctgtactacc agccatgggc aaccccacca tggtcttcaa catcgccatc 60
aacagcgagg ccttggggca cgtctccttc gaactgtttg cagacaagtt tccaaagaca 120
gaaaactttc gtgctctgag cactggagag aaaggatttg gttataaggg ttcctgcttt 180
cacagaatta ttctagggct tttgtgtcag ggtgggtgact ttacatgcca taatggcact 240
ggtggcaagt ctgtctacag ggagaaattt gatgatgaga acttcattct gaagcataca 300
ggtcctggca tcttgtccat gaagcataca ggtcctggca tcttgtccat ggcaaagtct 360
ggacccaaca caaacgattc ccagattttc atctgactg ccaagaccga gtggttgga 420
ggcaagcatg tggctctctg cagggtgaaa gaaggcatca agattgtgga ggccatgaag 480
cgctatgggt ccaagaatgg caagagcagg aagaagatca ccactgctga ctgtggacaa 540
ctctaataag tttgacttgt gttttatctt aaccaccaga ccattccttt tgtagctcag 600

<210> 82
<211> 173
<212> PRT
<213> Homo sapiens

<400> 82
Met Val Asn Pro Thr Met Phe Phe Asn Ile Ala Ile Asn Ser Glu Ala
1 5 10 15
Leu Gly His Val Ser Phe Glu Leu Phe Ala Asp Lys Phe Pro Lys Thr
20 25 30
Glu Asn Phe Arg Ala Leu Ser Thr Gly Glu Lys Gly Phe Gly Tyr Lys
35 40 45
Gly Ser Cys Phe His Arg Ile Ile Leu Gly Leu Leu Cys Gln Gly Gly
50 55 60
Asp Phe Thr Cys His Asn Gly Thr Gly Gly Lys Ser Val Tyr Arg Glu
65 70 75 80
Lys Phe Asp Asp Glu Asn Phe Ile Leu Lys His Thr Gly Pro Gly Ile
85 90 95
Leu Ser Met Lys His Thr Gly Pro Gly Ile Leu Ser Met Ala Asn Ala
100 105 110
Gly Pro Asn Thr Asn Asp Ser Gln Ile Phe Ile Cys Thr Ala Lys Thr
115 120 125
Glu Trp Leu Asp Gly Lys His Val Val Ser Gly Arg Val Lys Glu Gly

130 135 140
 Ile Lys Ile Val Glu Ala Met Lys Arg Tyr Gly Ser Lys Asn Gly Lys
 145 150 155 160

Ser Arg Lys Lys Ile Thr Thr Ala Asp Cys Gly Gln Leu
 165 170

<210> 83
 <211> 566
 <212> DNA
 <213> Homo sapiens

<400> 83
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 ttggggcacg tctccttcga actgtttgca gacaagtttc caaagacaga aaactttcgt 120
 gctctgagca ctggagagaa aggatttggg tataagggtt cctgctttca cagaattatt 180
 ctagggtctt tgtgtcaggg tggtgacttt acatgccata atggcactgg tggcaagtct 240
 gtctacaggg agaaatttga tgatgagaac ttcattctga agcatacagg tcctggcatc 300
 ttgtccatga agcatacagg tcctggcatc ttgtccatgg caaatgctgg acccaacaca 360
 aacgattccc agattttcat ctgcactgcc aagaccgagt gggttgatgg caagcatgtg 420
 gtctctggca ggggtgaaaga aggcataag attgtggagg ccatgaagcg ctatgggtcc 480
 aagaatggca agagcaggaa gaagatcacc actgctgact gtggacaact ctaataagtt 540
 tgacttgtgt tttatcttaa ccacca 566

<210> 84
 <211> 173
 <212> PRT
 <213> Homo sapiens

<400> 84
 Met Val Asn Pro Thr Met Phe Phe Asn Ile Ala Ile Asn Ser Glu Ala
 1 5 10 15
 Leu Gly His Val Ser Phe Glu Leu Phe Ala Asp Lys Phe Pro Lys Thr
 20 25 30
 Glu Asn Phe Arg Ala Leu Ser Thr Gly Glu Lys Gly Phe Gly Tyr Lys
 35 40 45
 Gly Ser Cys Phe His Arg Ile Ile Leu Gly Leu Leu Cys Gln Gly Gly
 50 55 60
 Asp Phe Thr Cys His Asn Gly Thr Gly Gly Lys Ser Val Tyr Arg Glu
 65 70 75 80
 Lys Phe Asp Asp Glu Asn Phe Ile Leu Lys His Thr Gly Pro Gly Ile
 85 90 95
 Leu Ser Met Lys His Thr Gly Pro Gly Ile Leu Ser Met Ala Asn Ala
 100 105 110
 Gly Pro Asn Thr Asn Asp Ser Gln Ile Phe Ile Cys Thr Ala Lys Thr
 115 120 125

Glu Trp Leu Asp Gly Lys His Val Val Ser Gly Arg Val Lys Glu Gly
 130 135 140

Ile Lys Ile Val Glu Ala Met Lys Arg Tyr Gly Ser Lys Asn Gly Lys
 145 150 155 160

Ser Arg Lys Lys Ile Thr Thr Ala Asp Cys Gly Gln Leu
 165 170

<210> 85
 <211> 660
 <212> DNA
 <213> Homo sapiens

<400> 85
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 ttccacattg ctgtcgatgg cgagcccttg ggctgtgtct ccttcgaggt agagctgttt 180
 gcagacaagg ttccaaagac agcagaaaaat ttccatgctc tgagcactgg agaaaaagga 240
 tttggttata agggttcctg ctttcacaga attattccag gggtttacgtg tcagagtggg 300
 gacttcacac gccatgggtg caagtccatc tgcagggaga aatttgatga caagaacttc 360
 atcctgaagc atacgggtcc tggcatcttg tccatggcaa atgctggacc cagcgtgaac 420
 gtttcccagt tttttatctg ccctgccaa acagagtggg tggattgcaa gcatgtggtc 480
 tttggcaagg tgaaagatgg catgaatatt gtggagggtca tggagcactt ggggtccaag 540
 aatggcaaga tcagcaagaa gatcaccatt gctgactgga caactgcaat aaatttgacg 600
 ggtgttttctc ttaaaaaaaaa aaaaaaaata ctgtgacaga ccaaggtaaa ttgtttttga 660

<210> 86
 <211> 203
 <212> PRT
 <213> Homo sapiens

<400> 86
 Met Lys Leu Thr Phe Lys Lys Lys Ala Val Ser Phe Ala Asp Ala Ala
 1 5 10 15
 Ala Ala Gln Gly Pro Leu Leu Pro Ala Met Val Asn Pro Thr Met Phe
 20 25 30
 Phe His Ile Ala Val Asp Gly Glu Pro Leu Gly Cys Val Ser Phe Glu
 35 40 45
 Val Glu Leu Phe Ala Asp Lys Val Pro Lys Thr Ala Glu Asn Phe His
 50 55 60
 Ala Leu Ser Thr Gly Glu Lys Gly Phe Gly Tyr Lys Gly Ser Cys Phe
 65 70 75 80
 His Arg Ile Ile Pro Gly Phe Thr Cys Gln Ser Gly Asp Phe Thr Arg
 85 90 95
 His Gly Gly Lys Ser Ile Cys Arg Glu Lys Phe Asp Asp Lys Asn Phe
 100 105 110
 Ile Leu Lys His Thr Gly Pro Gly Ile Leu Ser Met Ala Asn Ala Gly

115 120 125

Pro Ser Val Asn Val Ser Gln Phe Phe Ile Cys Pro Ala Lys Thr Glu
130 135 140

Trp Leu Asp Cys Lys His Val Val Phe Gly Lys Val Lys Asp Gly Met
145 150 155 160

Asn Ile Val Glu Val Met Glu His Leu Gly Ser Lys Asn Gly Lys Ile
165 170 175

Ser Lys Lys Ile Thr Ile Ala Asp Trp Thr Thr Ala Ile Asn Leu Thr
180 185 190

Gly Val Ser Leu Lys Lys Lys Lys Lys Ile Leu
195 200

<210> 87
<211> 600
<212> DNA
<213> Homo sapiens

<400> 87
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gagcacttgg gccatgtctc cttccagctg tttgcaaaga aagttccaaa gacagcagaa 180
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cctggcacct tgtccatggc aaatactgga cgctacacaa atgggtttcca gtttttcatc 420
tgcactgcca aaactgtgtg gttgggtggc aagagtgcag tctttggcaa gacaaaagag 480
ggcttgaata tcttgaagc catggcgcac tttgctttct ggaatggcaa aaccagaaag 540
aagaccacga ttgacaactg tggacaactc caataaattt aacttatgtt ttgttttaac 600

<210> 88
<211> 176
<212> PRT
<213> Homo sapiens

<400> 88
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1 5 10 15

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20 25 30

Phe Gln Leu Phe Ala Lys Lys Val Pro Lys Thr Ala Glu Asn Val His
35 40 45

Phe Val Ser Thr Gly Glu Lys Gly Phe Gly Tyr Lys Cys Ser Cys Phe
50 55 60

His Arg Ile Ile Pro Gly Phe Ile Cys Gln Ser Gly Asp Phe Thr Cys
65 70 75 80

His Asp Asp Thr Gly Thr Lys Ser Asn Tyr Trp Glu Lys Ser Asp Asp
 85 90 95
 Asp Asn Ser Ile Leu Lys His Thr Arg Pro Gly Thr Leu Ser Met Ala
 100 105 110
 Asn Thr Gly Arg Tyr Thr Asn Gly Phe Gln Phe Phe Ile Cys Thr Ala
 115 120 125
 Lys Thr Val Trp Leu Gly Gly Lys Ser Ala Val Phe Gly Lys Thr Lys
 130 135 140
 Glu Gly Leu Asn Ile Leu Glu Ala Met Ala His Phe Ala Phe Trp Asn
 145 150 155 160
 Gly Lys Thr Arg Lys Lys Thr Thr Ile Asp Asn Cys Gly Gln Leu Gln
 165 170 175

<210> 89
 <211> 600
 <212> DNA
 <213> Homo sapiens

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 tttgggtatg tatattgtag atctatttat ataatttca cacctggtag taaaaaagcc 480
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<210> 90
 <211> 180
 <212> PRT
 <213> Homo sapiens

<400> 90
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 Cys Thr Gly Lys Ala Gly Phe Ser Gln Arg Gly Ile Arg Leu His Tyr
 35 40 45
 Lys Asn Ser Ile Phe His Arg Ile Val Gln Asn Gly Trp Ile Gln Gly
 50 55 60

Gly Asp Ile Val Tyr Gly Lys Gly Asp Asn Gly Glu Ser Ile Tyr Gly
 65 70 75 80
 Pro Thr Phe Glu Asp Glu Asn Phe Ser Val Pro His Asn Lys Arg Gly
 85 90 95
 Val Leu Gly Met Ala Asn Lys Gly Arg His Ser Asn Gly Ser Gln Phe
 100 105 110
 Tyr Ile Thr Leu Gln Ala Thr Pro Tyr Leu Asp Arg Lys Phe Val Ala
 115 120 125
 Phe Gly Tyr Val Tyr Cys Arg Ser Ile Tyr Ile Ile Phe Thr Pro Gly
 130 135 140
 Ser Lys Lys Ala Gln Arg Ser Met Cys Lys Lys Leu Thr Val Cys Gly
 145 150 155 160
 Cys Gly Arg Ser Phe Ser Lys Glu Glu Val Val Lys Cys Cys Asn Lys
 165 170 175
 Asp Asn Ser Ser
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<210> 91
 <211> 572
 <212> DNA
 <213> Homo sapiens

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 ttgcccagaca aagttccaaa aacagtggaa aacttttcgtg cactgagcac tggaggaaaa 180
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 aagcacaagg tcttttgcaa agtgagaaga ggggtgaata tcatggaagc catggagtgc 480
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<210> 92
 <211> 166
 <212> PRT
 <213> Homo sapiens

<400> 92
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 20 25 30
 Lys Thr Val Glu Asn Phe Arg Ala Leu Ser Thr Gly Gly Lys Gly Phe

35 40 45
 Gly Tyr Lys Gly Ser Cys Phe His Arg Ile Ile Pro Gly Phe Ile Leu
 50 55 60
 Ser Ala Arg Val Leu Thr Ser His Thr Ile Ile Met Pro Gln Ser Ile
 65 70 75 80
 Tyr Gln Glu Lys Phe Asp Asp Glu Asn Phe Ile Leu Lys His Thr Gly
 85 90 95
 Pro Gly Ile Leu Ser Met Ala Asn Ala Gly Pro Asp Thr Asn Gly Ser
 100 105 110
 Gln Phe Phe Thr Cys Val Ala Lys Thr Glu Trp Leu Asp Gly Lys His
 115 120 125
 Lys Val Phe Gly Lys Val Arg Arg Gly Val Asn Ile Met Glu Ala Met
 130 135 140
 Glu Cys Ser Gly Ser Gly Asn Gly Glu Thr Gly Lys Lys Ile Thr Thr
 145 150 155 160
 Ala Asn Cys Gly Gln Leu
 165

<210> 93
 <211> 525
 <212> DNA
 <213> Homo sapiens

<400> 93
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 gaagaaaatt tttgtgctct gaacactgga gagaaagtat ttggtgataa atgtccctgc 180
 ttttacagaa ttattccggg ggtgtgtcag ggtggtgact tcacacacca taatggcact 240
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 gtcctggcg tcttgtccac ggcaaagct ggacccacca caaatgggtc ccagtttttc 360
 ttctgtactg ccaagacaga ggatggacag catgtggtct ttggcaaggt gaaagatggc 420
 atgagtattg tggaagccct ggaacgctct gggtccagga atggtaagac cagcaagaag 480
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<210> 94
 <211> 161
 <212> PRT
 <213> Homo sapiens

<400> 94
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 Leu Gly Cys Ile Ser Phe Lys Leu Phe Ala Asp Lys Val Leu Lys Met
 20 25 30
 Glu Glu Asn Phe Cys Ala Leu Asn Thr Gly Glu Lys Val Phe Gly Asp

35	40	45
Lys Cys Pro Cys Phe Tyr Arg Ile Ile Pro Gly Val Cys Gln Gly Gly		
50	55	60
Asp Phe Thr His His Asn Gly Thr Gly Gly Lys Ser Leu Tyr Ser Lys		
65	70	75
Glu Phe Asp Asp Glu Asn Phe Ile Leu Lys His Thr Ala Pro Gly Val		
	85	90
Leu Ser Thr Ala Asn Ala Gly Pro Thr Thr Asn Gly Ser Gln Phe Phe		
	100	105
Phe Cys Thr Ala Lys Thr Glu Asp Gly Gln His Val Val Phe Gly Lys		
	115	120
Val Lys Asp Gly Met Ser Ile Val Glu Ala Leu Glu Arg Ser Gly Ser		
	130	135
Arg Asn Gly Lys Thr Ser Lys Lys Ile Thr Ala Ala Asp Cys Gly Gln		
145	150	155
		160

Leu

<210> 95

<211> 720

<212> DNA

<213> Homo sapiens

<400> 95

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attgtggaag ccatggaatg ctttgggtcc aggaatggca agacaagcaa gatcgccatt 660
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<210> 96

<211> 160

<212> PRT

<213> Homo sapiens

<400> 96

Met Val Ile Pro Thr Val Pro Phe Asn Ile Thr Ile Asn Ser Lys Pro
1 5 10 15

Leu Gly His Ile Ser Phe Gln Leu Phe Ala Asp Lys Phe Pro Lys Thr

	20		25		30										
Gly	Glu	Asn	Phe	His	Thr	Leu	Asn	Asn	Lys	Asp	Lys	Gly	Phe	Gly	Ser
	35						40					45			
Cys	Phe	His	Arg	Ile	Ile	Pro	Glu	Phe	Ile	Cys	Gln	Gly	Asp	Asp	Phe
	50					55					60				
Thr	Pro	His	Asn	Gly	Ile	Gly	Gly	Lys	Ser	Ile	Tyr	Gly	Asp	Lys	Phe
	65				70					75					80
Asp	Asp	Lys	Asn	Phe	Ile	Val	Lys	His	Thr	Gly	Leu	Gly	Ile	Leu	Ser
			85						90					95	
Met	Ala	Asn	Ala	Ala	Pro	Lys	Thr	Asn	Glu	Ser	Gln	Phe	Phe	Ile	Cys
		100						105					110		
Thr	Ala	Met	Ala	Lys	Trp	Trp	Asp	Gly	Lys	His	Val	Ile	Phe	Gly	Arg
	115						120					125			
Val	Lys	Glu	Gly	Met	Asn	Ile	Val	Glu	Ala	Met	Glu	Cys	Phe	Gly	Ser
	130				135						140				
Arg	Asn	Gly	Lys	Thr	Ser	Lys	Ile	Ala	Ile	Ala	Asn	Cys	Arg	Gln	Leu
145					150					155					160

<210> 97
 <211> 600
 <212> DNA
 <213> Homo sapiens

<400> 97
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<210> 98
 <211> 160
 <212> PRT
 <213> Homo sapiens

<400> 98
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Leu Gly His Ile Ser Phe Gln Leu Phe Ala Asp Lys Phe Pro Lys Thr
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 Gly Glu Asn Phe His Thr Leu Asn Asn Lys Asp Lys Gly Phe Gly Ser
 35 40 45
 Cys Phe His Arg Ile Ile Pro Glu Phe Ile Cys Gln Gly Asp Asp Phe
 50 55 60
 Thr Pro His Asn Gly Ile Gly Gly Lys Ser Ile Tyr Gly Asp Lys Phe
 65 70 75 80
 Asp Asp Lys Asn Phe Ile Val Lys His Thr Gly Leu Gly Ile Leu Ser
 85 90 95
 Met Ala Asn Ala Ala Pro Lys Thr Asn Glu Ser Gln Phe Phe Ile Cys
 100 105 110
 Thr Ala Met Ala Lys Trp Trp Asp Gly Lys His Val Ile Phe Gly Arg
 115 120 125
 Val Lys Glu Gly Met Asn Ile Val Glu Ala Met Glu Cys Phe Gly Ser
 130 135 140
 Arg Asn Gly Lys Thr Ser Lys Ile Ala Ile Ala Asn Cys Arg Gln Leu
 145 150 155 160

<210> 99
 <211> 3146
 <212> DNA
 <213> Homo sapiens

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<210> 100
 <211> 1036
 <212> PRT
 <213> Homo sapiens

<400> 100
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 Trp Asn Tyr Ala Asn Ala Asp Glu Asn Phe Leu Met Ile Asp Thr Cys
 35 40 45
 Arg Thr His Met Pro Leu Phe Leu Gln Gly Gly Gln Ala Arg Lys Ser
 50 55 60
 Phe Val Phe Lys Lys Ala Leu Tyr Phe Gln Tyr Thr Asp Asn Thr Phe
 65 70 75 80
 Gln Arg Ile Ile Glu Lys Pro Ser Trp Leu Gly Phe Leu Gly Pro Met

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		405		410		415
Arg Glu Tyr Thr Asp Ala Ser Phe Gln Thr Gln Lys Ala Arg Glu Glu						
		420		425		430
His Leu Gly Ile Leu Gly Pro Val Ile Lys Ala Glu Val Arg Gln Thr						
		435		440		445
Ile Lys Ile Thr Phe Tyr Asn Asn Ala Ser Leu Pro Leu Ser Ile Gln						
		450		455		460
Pro Pro Gly Leu His Tyr Asn Lys Ser Leu Trp Gln Ser Tyr Tyr Phe						
		465		470		480
Ser Ser Tyr Ser Thr Val Thr Gln Arg Glu Arg Ser Val Pro Pro Pro						
		485		490		495
Ser Ser His Val Ser Pro Gly Thr Thr Phe Val Tyr Thr Trp Glu Val						
		500		505		510
Pro Lys Asp Val Gly Pro Thr Ser Thr Asp Pro Asn Cys Leu Thr Trp						
		515		520		525
Phe Tyr Tyr Ser Ser Val Asn Gly Lys Lys Asp Ile Asn Ser Gly Leu						
		530		535		540
Leu Gly Pro Leu Leu Ile Cys Arg Asn Gly Ser Leu Gly Asp Asp Gly						
		545		550		560
Lys Gln Lys Gly Val Asp Lys Glu Phe Tyr Leu Leu Ala Thr Ile Phe						
		565		570		575
Asp Glu Asn Glu Ser Asn Leu Leu Asp Glu Asn Ile Arg Thr Phe Ile						
		580		585		590
Thr Glu Pro Glu Asn Ile Asp Lys Glu Asp Thr Asp Cys Gln Ala Ser						
		595		600		605
Asn Lys Met Tyr Ala Ile Asn Gly Tyr Met Tyr Gly Asn Leu Pro Gly						
		610		615		620
Leu Asp Thr Cys Leu Gly Asp Asn Val Leu Trp His Val Phe Ser Val						
		625		630		640
Gly Ser Val Glu Asp Leu His Gly Ile Tyr Phe Ser Gly Asn Thr Phe						
		645		650		655
Thr Ser Leu Gly Ala Arg Arg Asp Thr Ile Pro Met Phe Pro Tyr Thr						
		660		665		670
Ser Gln Thr Leu Leu Met Thr Pro Asp Ser Ile Gly Thr Phe Asp Leu						
		675		680		685
Val Cys Met Thr Ile Lys His Asn Leu Gly Gly Met Lys His Lys Tyr						

690					695					700					
His	Val	Arg	Gln	Cys	Gly	Lys	Pro	Asn	Pro	Asp	Gln	Thr	Gln	Tyr	Gln
705					710					715					720
Glu	Glu	Lys	Ile	Ile	Ile	Thr	Ile	Ala	Ala	Glu	Glu	Met	Glu	Trp	Asp
					725					730					735
Tyr	Ser	Pro	Ser	Arg	Lys	Trp	Glu	Asn	Glu	Leu	His	His	Leu	Arg	Arg
					740					745					750
Glu	Ser	Gln	Thr	Ser	Met	Tyr	Val	Asp	Arg	Ser	Gly	Thr	Leu	Leu	Gly
					755										765
Ser	Lys	Tyr	Lys	Lys	Val	Leu	Tyr	Arg	Gln	Tyr	Asp	Asp	Asn	Thr	Ser
					770										780
Gln	Ile	Lys	Gln	Lys	Gly	Met	Arg	Val	Lys	Asn	Ile	Ser	Ile	Leu	Gly
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Pro	Leu	Ile	Leu	Leu	Asn	Pro	Gly	Gln	Ile	Ile	Gln	Ile	Ile	Phe	Lys
					805					810					815
Asn	Lys	Ala	Ala	Arg	Pro	Tyr	Ser	Ile	His	Ala	His	Gly	Val	Lys	Thr
					820					825					830
Asn	Asn	Ser	Thr	Val	Val	Pro	Thr	Gln	Pro	Gly	Glu	Ile	Gln	Ile	Tyr
					835					840					845
Thr	Trp	Gln	Ile	Pro	Asp	Arg	Thr	Gly	Pro	Thr	Ser	Leu	Asp	Phe	Glu
					850					855					860
Cys	Ile	Pro	Trp	Phe	Tyr	Tyr	Ser	Thr	Val	Ser	Val	Ala	Lys	Asp	Leu
					865					870					875
His	Ser	Gly	Leu	Val	Gly	Pro	Leu	Ser	Val	Cys	Arg	Lys	Asp	Ile	Asn
					885					890					895
Pro	Asn	Ile	Val	His	Arg	Val	Leu	His	Phe	Met	Ile	Phe	Asp	Glu	Asn
					900					905					910
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His	Val	Gly	Asp	Val	Val	Asn	Trp	Tyr	Leu	Ile	Gly	Ile	Gly	Asn	Glu
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Arg	Thr	Val	Lys	Met	Tyr	Arg	Arg	Asp	Val	Gly	Thr	Trp	Leu	Phe	Tyr

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Leu Pro Val Glu Leu Lys Gln Leu Lys Asn Ile Arg Ala Val Asn Leu		
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Gly Leu Asn His Leu Asp Ser Val Pro Thr Thr Leu Gly Ala Leu Lys		
130	135	140
Glu Leu His Glu Val Gly Leu His Asp Asn Leu Leu Asn Asn Ile Pro		
145	150	155
Val Ser Ile Ser Lys Leu Pro Lys Leu Lys Lys Leu Asn Ile Lys Arg		
165	170	175
Asn Pro Phe Pro Lys Pro Gly Glu Ser Glu Ile Phe Ile Asp Ser Ile		
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Arg Arg Leu Glu Asn Leu Tyr Val Val Glu Glu Lys Asp Leu Cys Ala		
195	200	205
Ala Cys Leu Arg Lys Cys Gln Asn Ala Arg Asp Asn Leu Asn Arg Ile		
210	215	220
Lys Asn Met Ala Thr Thr Thr Pro Arg Lys Thr Ile Phe Pro Asn Leu		
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Asp Leu Ser Lys Met Gly Ile Thr Thr Phe Pro Lys Cys Ile Leu Arg
35 40 45

Leu Ser Asp Met Asp Glu Leu Asp Leu Ser Arg Asn Leu Ile Arg Lys
50 55 60

Ile Pro Asp Ser Ile Ser Lys Phe Gln Asn Leu Arg Trp Leu Asp Leu
65 70 75 80

His Ser Asn Tyr Ile Asp Lys Leu Pro Glu Ser Ile Gly Gln Met Thr
85 90 95

Ser Leu Leu Tyr Leu Asn Val Ser Asn Asn Arg Leu Thr Ser Asn Gly
100 105 110

Leu Pro Val Glu Leu Lys Gln Leu Lys Asn Ile Arg Ala Val Asn Leu
115 120 125

Gly Leu Asn His Leu Asp Ser Val Pro Thr Met Leu Gly Ala Leu Lys
130 135 140

Glu Leu His Glu Val Gly Leu His Asp Asn Leu Leu Asn Asn Ile Pro
145 150 155 160

Val Ser Ile Ser Lys Leu Pro Lys Leu Lys Lys Leu Asn Ile Lys Arg
165 170 175

Asn Pro Phe Pro Lys Pro Gly Glu Ser Glu Ile Phe Ile Asp Ser Ile
180 185 190

Arg Arg Leu Glu Asn Leu Tyr Val Val Glu Glu Lys Asp Leu Cys Ala
195 200 205

Ala Cys Leu Arg Lys Cys Gln Asn Ala Arg Asp Asn Leu Asn Arg Ile
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Phe Val Thr Ala Arg Ala Gly Glu Ser Val Val Leu Arg Cys Asp Val
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Ile His Pro Val Thr Gly Gln Pro Pro Pro Tyr Val Val Glu Trp Phe
    50                      55                      60

Lys Phe Gly Val Pro Ile Pro Ile Phe Ile Lys Phe Gly Tyr Tyr Pro
    65                      70                      75                      80

Pro His Val Asp Pro Glu Tyr Ala Gly Lys Val Gly Ala His Gly Leu
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Arg Glu Glu Pro Glu Phe Val Thr Ala Arg Ala Gly Glu Ser Val Val
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Leu Arg Cys Asp Val Ile His Pro Val Thr Gly Gln Pro Pro Pro Tyr
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Val Val Glu Trp Phe Lys Phe Gly Val Pro Ile Pro Ile Phe Ile Lys
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Phe Gly Tyr Tyr Pro Pro His Val Asp Pro Glu Tyr Ala Gly Lys Val
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Ser Leu His Asp Lys Ala Ser Leu Arg Leu Glu Gln Val Arg Ser Glu
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Ser	Pro	Pro	Glu	Asn	Ile	Thr	Val	Asn	Ile	Ser	Gln	Asp	Ala	Leu	Leu	
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 Leu Pro Gly Trp Glu Tyr Arg Gln Glu Ala Gly Arg Glu Leu Leu Ile
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 Pro Cys Ala Ala Ala Gly Asp Pro Phe Pro Val Ile Thr Trp Arg Lys
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 Val Gly Lys Pro Ser Arg Ser Lys His Ser Ala Leu Pro Ser Gly Ser
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 Leu Gln Phe Arg Ala Leu Ser Lys Glu Asp His Gly Glu Trp Glu Cys
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 Val Ala Thr Asn Val Val Thr Ser Ile Thr Ala Ser Thr His Leu Thr
 565 570 575
 Val Ile Gly Thr Gly Thr Ser Pro His Ala Pro Gly Ser Val Arg Val
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 595 600 605
 Gly Gly Tyr Glu Gln Thr Phe Ser Val Trp Tyr Gly Pro Leu Met Lys
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 Arg Ala Gln Phe Gly Pro His Asp Trp Leu Ser Leu Pro Val Pro Pro
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 Gly Pro Ser Trp Leu Leu Val Asp Thr Leu Glu Pro Glu Thr Ala Tyr
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 Gln Phe Ser Val Leu Ala Gln Lys Leu Gly Thr Ser Ala Phe Ser Glu
 660 665 670
 Val Val Thr Val Asn Thr Leu Ala Phe Pro Ile Thr Thr Pro Glu Pro
 675 680 685
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 690 695 700
 Gln Gly Val Leu Leu Ser Trp Leu Pro Pro Ala Asn His Ser Phe Pro
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 Ile Asp Arg Tyr Ile Met Glu Phe Arg Val Ala Glu Arg Trp Glu Leu
 725 730 735
 Leu Asp Asp Gly Ile Pro Gly Thr Glu Gly Glu Phe Phe Ala Lys Asp
 740 745 750
 Leu Ser Gln Asp Thr Trp Tyr Glu Phe Arg Val Leu Ala Val Met Gln
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 Asp Leu Ile Gly Glu Pro Ser Asn Ile Ala Gly Val Ser Ser Thr Asp
 770 775 780

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Phe Val Thr Ala Arg Ala Gly Glu Ser Val Val Leu Arg Cys Asp Val
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Ile His Pro Val Thr Gly Gln Pro Pro Pro Tyr Val Val Glu Trp Phe
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Lys Phe Gly Val Pro Ile Pro Ile Phe Ile Lys Phe Gly Tyr Tyr Pro
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Pro His Val Asp Pro Glu Tyr Ala Gly Arg Ala Ser Leu His Asp Lys
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Ala Ser Leu Arg Leu Glu Gln Val Arg Ser Glu Asp Leu Gly Trp Tyr
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Glu Cys Lys Val Leu Met Leu Asp Gln Gln Tyr Asp Thr Phe His Asn
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Gly Ser Trp Val His Leu Thr Ile Asn Ala Pro Pro Thr Phe Thr Glu
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Thr Pro Pro Arg Tyr Ile Glu Ala Lys Glu Gly Gly Ser Ile Thr Met

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145	150	155	160
Thr Cys Thr Ala Phe Gly Asn Pro Lys Pro Ile Val Thr Trp Leu Lys	165	170	175
Glu Gly Thr Leu Leu Gly Ala Ser Gly Lys Tyr Gln Val Ser Asp Gly	180	185	190
Ser Leu Thr Val Thr Ser Val Ser Arg Glu Asp Arg Gly Ala Tyr Thr	195	200	205
Cys Arg Ala Tyr Ser Ile Gln Gly Glu Ala Val His Thr Thr His Leu	210	215	220
Leu Val Pro Gly Pro Pro Phe Ile Val Ser Pro Pro Glu Asn Ile Thr	225	230	235
Val Asn Ile Ser Gln Asp Ala Leu Leu Thr Cys Arg Ala Glu Ala Tyr	245	250	255
Pro Gly Asn Leu Thr Tyr Thr Trp Tyr Trp Gln Asp Glu Asn Val Tyr	260	265	270
Phe Gln Asn Asp Leu Lys Leu Arg Val Arg Ile Leu Ile Asp Gly Thr	275	280	285
Leu Ile Ile Phe Arg Val Lys Pro Glu Asp Ser Gly Lys Tyr Thr Cys	290	295	300
Val Pro Ser Asn Ser Leu Gly Arg Ser Pro Ser Ala Ser Ala Tyr Leu	305	310	315
Thr Val Gln Tyr Pro Ala Arg Val Leu Asn Met Pro Pro Val Ile Tyr	325	330	335
Val Pro Val Gly Ile His Gly Tyr Ile Arg Cys Pro Val Asp Ala Arg	340	345	350
Pro Pro Ala Thr Val Val Lys Trp Asn Lys Asp Gly Arg Pro Leu Gln	355	360	365
Val Glu Lys Asn Arg Gly Trp Thr Leu Met Glu Asp Gly Ser Ile Arg	370	375	380
Ile Glu Glu Ala Thr Glu Glu Ala Leu Gly Thr Tyr Thr Cys Val Pro	385	390	395
Tyr Asn Thr Leu Gly Thr Met Gly Gln Ser Ala Pro Ala Arg Leu Val	405	410	415
Leu Lys Asp Pro Pro Tyr Phe Thr Val Leu Pro Gly Trp Glu Tyr Arg	420	425	430
Gln Glu Ala Gly Arg Glu Leu Leu Ile Pro Cys Ala Ala Ala Gly Asp	435	440	445
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Ala Pro Gly Ser Val Arg Val Gln Val Ser Met Thr Thr Ala Asn Val				
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Pro Arg Cys Leu Ile Ala Asn Arg Thr Gln Gln Gly Val Leu Leu Ser				
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Gly Thr Glu Gly Glu Phe Phe Ala Lys Asp Leu Ser Gln Asp Thr Trp				
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Ser Asn Ile Ala Gly Val Ser Ser Thr Asp Ile Phe Pro Gln Pro Asp				
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Cys Phe Val Asn Lys Gln Arg Lys Arg Lys Leu Lys Arg Lys Lys Asp				

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Glu Gly Pro Gly Gly Leu Glu Gly Arg Leu Gln Ala Thr Gly Gln Ala 945 950 955 960		
Arg Pro Pro Ala Pro Arg Pro Phe His His Gly Gln Tyr Tyr Gly Tyr 965 970 975		
Leu Ser Ser Ser Ser Pro Gly Glu Val Glu Pro Pro Pro Phe Tyr Val 980 985 990		
Pro Glu Val Gly Ser Pro Leu Ser Ser Val Met Ser Ser Pro Pro Leu 995 1000 1005		
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Glu Asn Ala Ser Asn Ser Thr Leu Pro Leu Thr Gln Thr Pro Thr Gly 1025 1030 1035 1040		
Gly Arg Ser Pro Glu Pro Trp Gly Arg Pro Glu Phe Pro Phe Gly Gly 1045 1050 1055		
Leu Glu Thr Pro Ala Met Met Phe Pro His Gln Leu Pro Pro Cys Asp		

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Gly Phe Thr Thr Leu Ala Thr Gly Tyr Pro Ser Pro Pro Pro Gly Pro 1285 1290 1295		
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Ser Pro Arg Arg Thr Gly Glu Glu Leu Leu Arg Pro Glu Thr Pro Pro 1315 1320 1325		
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 Ser Ser Thr Gln Gly Asn Asn Lys Cys Gln Gln Thr Thr Glu Thr Tyr
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 100 105 110
 Ala Phe Ser Asp Ala Leu Leu Tyr Lys Ile Glu Asp Ile Asp Asn Lys

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Val Leu Gly Gly Gly Asp Val Asn Gly His Lys His Thr Ile Leu Val 165 170 175		
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<211> 5159

<212> PRT

<213> Homo sapiens

<400> 112

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Ser Arg Leu Phe Pro Pro Phe Glu Glu Ser Pro Leu Ser Pro Pro Pro
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Glu Glu Ser Pro Leu Ser Pro Pro Pro Glu Ala Ser Arg Leu Ser Pro
 35 40 45

Pro Pro Glu Asp Ser Pro Met Ser Pro Pro Pro Glu Glu Ser Pro Met

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Ser Pro Pro Pro Glu Val Ser Arg Leu Ser Pro Leu Pro Val Val Ser		
65	70	75 80
Arg Leu Ser Pro Pro Pro Glu Glu Ser Pro Leu Ser Pro Pro Pro Glu		
	85	90 95
Glu Ser Pro Thr Ser Pro Pro Pro Glu Ala Ser Arg Leu Ser Pro Pro		
	100	105 110
Pro Glu Asp Ser Pro Thr Ser Pro Pro Pro Glu Asp Ser Pro Ala Ser		
	115	120 125
Pro Pro Pro Glu Asp Ser Leu Met Ser Leu Pro Leu Glu Glu Ser Pro		
	130	135 140
Leu Leu Pro Leu Pro Glu Glu Pro Gln Leu Cys Pro Arg Ser Glu Gly		
145	150	155 160
Pro His Leu Ser Pro Arg Pro Glu Glu Pro His Leu Ser Pro Arg Pro		
	165	170 175
Glu Glu Pro His Leu Ser Pro Gln Ala Glu Glu Pro His Leu Ser Pro		
	180	185 190
Gln Pro Glu Glu Pro Cys Leu Cys Ala Val Pro Glu Glu Pro His Leu		
	195	200 205
Ser Pro Gln Ala Glu Gly Pro His Leu Ser Pro Gln Pro Glu Glu Leu		
	210	215 220
His Leu Ser Pro Gln Thr Glu Glu Pro His Leu Ser Pro Val Pro Glu		
225	230	235 240
Glu Pro Cys Leu Ser Pro Gln Pro Glu Glu Ser His Leu Ser Pro Gln		
	245	250 255
Ser Glu Glu Pro Cys Leu Ser Pro Arg Pro Glu Glu Ser His Leu Ser		
	260	265 270
Pro Glu Leu Glu Lys Pro Pro Leu Ser Pro Arg Pro Glu Lys Pro Pro		
	275	280 285
Glu Glu Pro Gly Gln Cys Pro Ala Pro Glu Glu Leu Pro Leu Phe Pro		
	290	295 300
Pro Pro Gly Glu Pro Ser Leu Ser Pro Leu Leu Gly Glu Pro Ala Leu		
305	310	315 320
Ser Glu Pro Gly Glu Pro Pro Leu Ser Pro Leu Pro Glu Glu Leu Pro		
	325	330 335
Leu Ser Pro Ser Gly Glu Pro Ser Leu Ser Pro Gln Leu Met Pro Pro		
	340	345 350
Asp Pro Leu Pro Pro Pro Leu Ser Pro Ile Ile Thr Ala Ala Ala Pro		

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Pro Ala Leu Ser Pro Leu Gly Glu Leu Glu Tyr Pro Phe Gly Ala Lys				
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Gly Asp Ser Asp Pro Glu Ser Pro Leu Ala Ala Pro Ile Leu Glu Thr				
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Pro Ile Ser Pro Pro Pro Glu Ala Asn Cys Thr Asp Pro Glu Pro Val				
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Pro Pro Met Ile Leu Pro Pro Ser Pro Gly Ser Pro Val Gly Pro Ala				
		420		430
Ser Pro Ile Leu Met Glu Pro Leu Pro Pro Gln Cys Ser Pro Leu Leu				
		435		445
Gln His Ser Leu Val Pro Gln Asn Ser Pro Pro Ser Gln Cys Ser Pro				
450		455		460
Pro Ala Leu Pro Leu Ser Val Pro Ser Pro Leu Ser Pro Ile Gly Lys				
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Val Val Gly Val Ser Asp Glu Ala Glu Leu His Glu Met Glu Thr Glu				
		485		495
Lys Val Ser Glu Pro Glu Cys Pro Ala Leu Glu Pro Ser Ala Thr Ser				
		500		510
Pro Leu Pro Ser Pro Met Gly Asp Leu Ser Cys Pro Ala Pro Ser Pro				
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Ala Pro Ala Leu Asp Asp Phe Ser Gly Leu Gly Glu Asp Thr Ala Pro				
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Leu Asp Gly Ile Asp Ala Pro Gly Ser Gln Pro Glu Pro Gly Gln Thr				
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Pro Gly Ser Leu Ala Ser Glu Leu Lys Gly Ser Pro Val Leu Leu Asp				
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Pro Glu Glu Leu Ala Pro Val Thr Pro Met Glu Val Tyr Pro Glu Cys				
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Lys Gln Thr Ala Gly Arg Gly Ser Pro Cys Glu Glu Gln Glu Glu Pro				
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Arg Ala Pro Val Ala Pro Thr Pro Pro Thr Leu Ile Lys Ser Asp Ile				
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Val Asn Glu Ile Ser Asn Leu Ser Gln Gly Asp Ala Ser Ala Ser Phe				
625		630		640
Pro Gly Ser Glu Pro Leu Leu Gly Ser Pro Asp Pro Glu Gly Gly Gly				
		645		655
Ser Leu Ser Met Glu Leu Gly Val Ser Thr Asp Val Ser Pro Ala Arg				

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Asp	Ser	Leu	Leu	Cys	Asp	Ala	Gly	Thr	Ala	Ile	Ser	Gly	Gly	Lys	Ala
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Glu	Gly	Glu	Lys	Gly	Arg	Arg	Arg	Ser	Ser	Pro	Ala	Arg	Ser	Arg	Ile
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Ser	Lys	Glu	Glu	Glu	Glu	Glu	Asp	Asp	Asp	Thr	Met	Gln	Asn	Thr	Val
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Val	Leu	Phe	Ser	Asn	Thr	Asp	Lys	Phe	Val	Leu	Met	Gln	Asp	Met	Cys
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Val	Val	Cys	Gly	Ser	Phe	Gly	Arg	Gly	Ala	Glu	Gly	His	Leu	Leu	Ala
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Cys	Ser	Gln	Cys	Ser	Gln	Cys	Tyr	His	Pro	Tyr	Cys	Val	Asn	Ser	Lys
			820					825					830		
Ile	Thr	Lys	Val	Met	Leu	Leu	Lys	Gly	Trp	Arg	Cys	Val	Glu	Cys	Ile
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Val	Cys	Glu	Val	Cys	Gly	Gln	Ala	Ser	Asp	Pro	Ser	Arg	Leu	Leu	Leu
	850					855					860				
Cys	Asp	Asp	Cys	Asp	Ile	Ser	Tyr	His	Thr	Tyr	Cys	Leu	Asp	Pro	Pro
	865					870					875				880
Leu	Leu	Thr	Val	Pro	Lys	Gly	Gly	Trp	Lys	Cys	Lys	Trp	Cys	Val	Ser
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Cys	Met	Gln	Cys	Gly	Ala	Ala	Ser	Pro	Gly	Phe	His	Cys	Glu	Trp	Gln
			900					905					910		
Asn	Ser	Tyr	Thr	His	Cys	Gly	Pro	Cys	Ala	Ser	Leu	Val	Thr	Cys	Pro
		915					920					925			
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Asp	Asp	Val	Asp	His	Ala	Pro	Asp	Glu	Gly	Phe	Asp	Cys	Val	Ser	Cys

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Gln Leu Phe Lys Asp Val	Leu Gly Ser Glu Arg Glu Gln His Leu Gly		
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Cys Gly Thr Pro Gly Leu Glu Gly Ser Arg Thr Pro Leu Gln Arg Pro			
1330	1335	1340	
Phe Leu Gln Gly Gly Leu Pro Leu Gly Asn Leu Pro Ser Ser Ser Pro			
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Met Asp Ser Tyr Pro Gly Leu Cys Gln Ser Pro Phe Leu Asp Ser Arg			
1365	1370	1375	
Glu Arg Gly Gly Phe Phe Ser Pro Glu Pro Gly Glu Pro Asp Ser Pro			
1380	1385	1390	
Trp Thr Gly Ser Gly Gly Thr Thr Pro Ser Thr Pro Thr Thr Pro Thr			
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Thr Glu Gly Glu Gly Asp Gly Leu Ser Tyr Asn Gln Arg Ser Leu Gln			
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Arg Trp Glu Lys Asp Glu Glu Leu Gly Gln Leu Ser Thr Ile Ser Pro			
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Val Leu Tyr Ala Asn Ile Asn Phe Pro Asn Leu Lys Gln Asp Tyr Pro			
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Pro Ala Ala Asp Lys Ala Pro Tyr Leu Gln Lys Ala Lys Asp Asn Arg			
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Asn Lys Gln Thr Lys Val Gly Asp Ile Ala Arg Lys Thr Asp Arg Pro			
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Ala Gly Leu Ser Thr Ser Ala Asp Gly Phe Leu Lys Pro Pro Ala Gly			
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Ser Val Pro Gly Pro Asp Ser Pro Gly Glu Leu Phe Leu Lys Leu Pro			

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Pro Ala Tyr	Pro Leu Glu	Pro Arg Phe	Pro Thr Ala	Pro Pro Thr Tyr
	1605		1610	1615
Pro Pro Tyr	Pro Ser Pro	Thr Gly Ala	Pro Ala Gln	Pro Pro Met Leu
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Gly Ala Ser	Ser Arg Pro	Gly Ala Gly	Gln Pro Gly	Glu Phe His Thr
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Thr Pro Pro	Gly Thr Pro	Arg His Gln	Pro Ser Thr	Pro Asp Pro Phe
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Leu Lys Pro	Arg Cys Pro	Ser Leu Asp	Asn Leu Ala	Val Pro Glu Ser
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Pro Gly Val	Gly Gly Gly	Lys Ala Ser	Glu Pro Leu	Leu Ser Pro Pro
	1685		1690	1695
Pro Phe Gly	Glu Ser Arg	Lys Ala Leu	Glu Val Lys	Lys Glu Glu Leu
	1700		1705	1710
Gly Ala Ser	Ser Pro Ser	Tyr Gly Pro	Pro Asn Leu	Gly Phe Val Asp
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Ser Pro Ser	Ser Gly Thr	His Leu Gly	Gly Leu Glu	Leu Lys Thr Pro
1730		1735		1740
Asp Val Phe	Lys Ala Pro	Leu Thr Pro	Arg Ala Ser	Gln Val Glu Pro
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Gln Ser Pro	Gly Leu Gly	Leu Arg Pro	Gln Glu Pro	Pro Pro Ala Gln
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Ala Leu Ala	Pro Ser Pro	Pro Ser His	Pro Asp Ile	Phe Arg Pro Gly
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Ser Tyr Thr	Asp Pro Tyr	Ala Gln Pro	Pro Pro Leu	Thr Pro Arg Pro Gln
	1795		1800	1805
Pro Pro Pro	Pro Glu Ser	Cys Cys Ala	Leu Pro Pro	Arg Ser Leu Pro
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Ser Asp Pro	Phe Ser Arg	Val Pro Val	Ser Pro Gln	Ser Gln Ser Ser
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Pro Pro Ser	Arg Pro Gln	Ser Arg Asp	Pro Phe Ala	Pro Leu His Lys

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Gly Pro Ala Gly Glu Leu His Ala Lys Val Pro Ser Gly Gln Pro Pro 1925 1930 1935		
Asn Phe Val Arg Ser Pro Gly Thr Gly Ala Phe Val Gly Thr Pro Ser 1940 1945 1950		
Pro Met Arg Phe Thr Phe Pro Gln Ala Val Gly Glu Pro Ser Leu Lys 1955 1960 1965		
Pro Pro Val Pro Gln Pro Gly Leu Pro Pro Pro His Gly Ile Asn Ser 1970 1975 1980		
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Thr Val Ala Thr Gly Asn Phe His Pro Ser Gly Ser Pro Leu Gly Pro 2005 2010 2015		
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Leu Pro Gly Thr Gln Asp Pro Gly Met Ser Gly Leu Ser Gln Thr Glu 2085 2090 2095		
Leu Glu Lys Gln Arg Gln Arg Gln Arg Leu Arg Glu Leu Leu Ile Arg 2100 2105 2110		
Gln Gln Ile Gln Arg Asn Thr Leu Arg Gln Glu Lys Glu Thr Ala Ala 2115 2120 2125		
Ala Ala Ala Gly Ala Val Gly Pro Pro Gly Ser Trp Gly Ala Glu Pro 2130 2135 2140		
Ser Ser Pro Ala Phe Glu Gln Leu Ser Arg Gly Gln Thr Pro Phe Ala 2145 2150 2155 2160		
Gly Thr Gln Asp Lys Ser Ser Leu Val Gly Leu Pro Pro Ser Lys Leu 2165 2170 2175		
Ser Gly Pro Ile Leu Gly Pro Gly Ser Phe Pro Ser Asp Asp Arg Leu		

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2195	2200	2205
Arg Gln Leu Val Gly Gly Ser Gln Ala Phe Tyr Gln Arg Ala Pro Tyr		
2210	2215	2220
Pro Gly Ser Leu Pro Leu Gln Gln Gln Gln Gln Leu Trp Gln Gln		
2225	2230	2240
Gln Gln Ala Thr Ala Ala Thr Ser Met Arg Phe Ala Met Ser Ala Arg		
2245	2250	2255
Phe Pro Ser Thr Pro Gly Pro Glu Leu Gly Arg Gln Ala Leu Gly Ser		
2260	2265	2270
Pro Leu Ala Gly Ile Ser Thr Arg Leu Pro Gly Pro Gly Glu Pro Val		
2275	2280	2285
Pro Gly Pro Ala Gly Pro Ala Gln Phe Ile Glu Leu Arg His Asn Val		
2290	2295	2300
Gln Lys Gly Leu Gly Pro Gly Gly Thr Pro Phe Pro Gly Gln Gly Pro		
2305	2310	2320
Pro Gln Arg Pro Arg Phe Tyr Pro Val Ser Glu Asp Pro His Arg Leu		
2325	2330	2335
Ala Pro Glu Gly Leu Arg Gly Leu Ala Val Ser Gly Leu Pro Pro Gln		
2340	2345	2350
Lys Pro Ser Ala Pro Pro Ala Pro Glu Leu Asn Asn Ser Leu His Pro		
2355	2360	2365
Thr Pro His Thr Lys Gly Pro Thr Leu Pro Thr Gly Leu Glu Leu Val		
2370	2375	2380
Asn Arg Pro Pro Ser Ser Thr Glu Leu Gly Arg Pro Asn Pro Leu Ala		
2385	2390	2395
Leu Glu Ala Gly Lys Leu Pro Cys Glu Asp Pro Glu Leu Asp Asp Asp		
2405	2410	2415
Phe Asp Ala His Lys Ala Leu Glu Asp Asp Glu Glu Leu Ala His Leu		
2420	2425	2430
Gly Leu Gly Val Asp Val Ala Lys Gly Asp Asp Glu Leu Gly Thr Leu		
2435	2440	2445
Glu Asn Leu Glu Thr Asn Asp Pro His Leu Asp Asp Leu Leu Asn Gly		
2450	2455	2460
Asp Glu Phe Asp Leu Leu Ala Tyr Thr Asp Pro Glu Leu Asp Thr Gly		
2465	2470	2475
Asp Lys Lys Asp Ile Phe Asn Glu His Leu Arg Leu Val Glu Ser Ala		

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Asn Glu Glu Ala Glu Arg Glu Ala Leu Leu Arg Gly Val Glu Pro Gly		
2500	2505	2510
Pro Leu Gly Pro Glu Glu Arg Pro Pro Pro Ala Ala Asp Ala Ser Glu		
2515	2520	2525
Pro Arg Leu Ala Ser Val Leu Pro Glu Val Lys Pro Lys Val Glu Glu		
2530	2535	2540
Gly Gly Arg His Pro Ser Pro Cys Gln Phe Thr Ile Ala Thr Pro Lys		
2545	2550	2555
		2560
Val Glu Pro Ala Pro Ala Ala Asn Ser Leu Gly Leu Gly Leu Lys Pro		
2565	2570	2575
Gly Gln Ser Met Met Gly Ser Arg Asp Thr Arg Met Gly Thr Gly Pro		
2580	2585	2590
Phe Ser Ser Ser Gly His Thr Ala Glu Lys Ala Ser Phe Gly Ala Thr		
2595	2600	2605
Gly Gly Pro Pro Ala His Leu Leu Thr Pro Ser Pro Leu Ser Gly Pro		
2610	2615	2620
Gly Gly Ser Ser Leu Leu Glu Lys Phe Glu Leu Glu Ser Gly Ala Leu		
2625	2630	2635
		2640
Thr Leu Pro Gly Gly Pro Ala Ala Ser Gly Asp Glu Leu Asp Lys Met		
2645	2650	2655
Glu Ser Ser Leu Val Ala Ser Glu Leu Pro Leu Leu Ile Glu Asp Leu		
2660	2665	2670
Leu Glu His Glu Lys Lys Glu Leu Gln Lys Lys Gln Gln Leu Ser Ala		
2675	2680	2685
Gln Leu Gln Pro Ala Gln Gln Gln Gln Gln Gln Gln Gln His Ser		
2690	2695	2700
Leu Leu Pro Ala Pro Gly Pro Ala Gln Ala Met Ser Leu Pro His Glu		
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		2720
Gly Ser Ser Pro Ser Leu Ala Gly Ser Gln Gln Gln Leu Ser Leu Gly		
2725	2730	2735
Leu Ala Val Ala Arg Gln Pro Gly Leu Pro Gln Pro Leu Met Pro Thr		
2740	2745	2750
Gln Pro Pro Ala His Ala Leu Gln Gln Arg Leu Ala Pro Ser Met Ala		
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Met Val Ser Asn Gln Gly His Met Leu Ser Gly Gln His Gly Gly Gln		
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Ala Gly Leu Val Pro Gln Gln Ser Ser Gln Pro Val Leu Ser Gln Lys		

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Asp Lys Phe Ala Ala Glu Asp Ile Ile Gly Pro Ile Ala Lys Ala Lys						
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Arg Leu Ser Gly Gly Pro Ser Ser Asp Leu Gln Asn His Val Ala Ala						
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Asn Pro Pro Thr Phe Ala Gln Gly Val Ile Asn Glu Ala Asp Gln Arg						
	2915		2920		2925	
Gln Tyr Glu Glu Trp Leu Phe His Thr Gln Gln Leu Leu Gln Met Gln						
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Leu Lys Val Leu Glu Glu Gln Ile Gly Val His Arg Lys Ser Arg Lys						
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Thr Asn Leu Met Ala Glu Tyr Arg Asn Lys Gln Gln Gln Gln Gln						
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Gln Gln Gln Gln Gln Gln Gln Gln His Ser Ala Val Leu Ala Leu Ser						
	3025		3030		3035	3040
Pro Ser Gln Ser Pro Arg Leu Leu Thr Lys Leu Pro Gly Gln Leu Leu						
	3045		3050		3055	
Pro Gly His Gly Leu Gln Pro Pro Gln Gly Pro Pro Gly Gly Gln Ala						
	3060		3065		3070	
Gly Gly Leu Arg Leu Thr Pro Gly Gly Met Ala Leu Pro Gly Gln Pro						
	3075		3080		3085	
Gly Gly Pro Phe Leu Asn Thr Ala Leu Ala Gln Gln Gln Gln Gln						

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His Ser Gly Gly Ala Gly Ser Leu Ala Gly Pro Ser Gly Gly Phe Phe 3105 3110 3115 3120		
Pro Gly Asn Leu Ala Leu Arg Ser Leu Gly Pro Asp Ser Arg Leu Leu 3125 3130 3135		
Gln Glu Arg Gln Leu Gln Leu Gln Gln Gln Arg Met Gln Leu Ala Gln 3140 3145 3150		
Lys Leu Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln His Leu Leu 3155 3160 3165		
Gly Gln Val Ala Ile Gln Gln Gln Gln Gln Gln Gly Pro Gly Val Gln 3170 3175 3180		
Thr Asn Gln Ala Leu Gly Pro Lys Pro Gln Gly Leu Met Pro Pro Ser 3185 3190 3195 3200		
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Gln Gln Met Gly Leu Leu Asn Gln Ser Arg Thr Leu Leu Ser Pro Gln		

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Leu Thr Gly Lys Glu Gln Asn Thr Val Asp Pro Ala Val Ser Ser Glu		
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Ala Thr Glu Gly Pro Ser Thr His Gln Gly Gly Pro Leu Ala Ile Gly		
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Thr Thr Pro Glu Ser Met Ala Thr Glu Pro Gly Glu Val Lys Pro Ser		
3475	3480	3485
Leu Ser Gly Asp Ser Gln Leu Leu Leu Val Gln Pro Gln Pro Gln Pro		
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Gln Pro Ser Ser Leu Gln Leu Gln Pro Pro Leu Arg Leu Pro Gly Gln		
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Gln Gln Gln Gln Val Ser Leu Leu His Thr Ala Gly Gly Gly Ser His		
3525	3530	3535
Gly Gln Leu Gly Ser Gly Ser Ser Ser Glu Ala Ser Ser Val Pro His		
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Leu Leu Ala Gln Pro Ser Val Ser Leu Gly Asp Gln Pro Gly Ser Met		
3555	3560	3565
Thr Gln Asn Leu Leu Gly Pro Gln Gln Pro Met Leu Glu Arg Pro Met		
3570	3575	3580
Gln Asn Asn Thr Gly Pro Gln Pro Pro Lys Pro Gly Pro Val Leu Gln		
3585	3590	3595 3600
Ser Gly Gln Gly Leu Pro Gly Val Gly Ile Met Pro Thr Val Gly Gln		
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Leu Arg Ala Gln Leu Gln Gly Val Leu Ala Lys Asn Pro Gln Leu Arg		
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His Leu Ser Pro Gln Gln Gln Gln Gln Leu Gln Ala Leu Leu Met Gln		
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Arg Gln Leu Gln Gln Ser Gln Ala Val Arg Gln Thr Pro Pro Tyr Gln		
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Glu Pro Gly Thr Gln Thr Ser Pro Leu Gln Gly Leu Leu Gly Cys Gln		
3665	3670	3675 3680
Pro Gln Leu Gly Gly Phe Pro Gly Pro Gln Thr Gly Pro Leu Gln Glu		
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Leu Gly Ala Gly Pro Arg Pro Gln Gly Pro Pro Arg Leu Pro Ala Pro		

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Pro Gly Ala Leu Ser Thr Gly Pro Val Leu Gly Pro Val His Pro Thr		
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Pro Pro Pro Ser Ser Pro Gln Glu Pro Lys Arg Pro Ser Gln Leu Pro		
3730	3735	3740
Ser Pro Ser Ser Gln Leu Pro Thr Glu Ala Gln Leu Pro Pro Thr His		
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Pro Gly Thr Pro Lys Pro Gln Gly Pro Thr Leu Glu Pro Pro Pro Gly		
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Arg Val Ser Pro Ala Ala Ala Gln Leu Ala Asp Thr Leu Phe Ser Lys		
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Gly Leu Gly Pro Trp Asp Pro Pro Asp Asn Leu Ala Glu Thr Gln Lys		
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Gln Val Val Pro Glu Ala Ser Gln Leu Ser Ile Lys Gln Glu Pro Arg		
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3845	3850	3855
Gly Glu Pro Ile Gly Ala Pro Gly Thr Ser Asn His Leu Leu Leu Ala		
3860	3865	3870
Gly Pro Arg Ser Glu Ala Gly His Leu Leu Leu Gln Lys Leu Leu Arg		
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Ala Lys Asn Val Gln Leu Ser Thr Gly Gln Gly Ser Glu Gly Leu Arg		
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Ala Glu Ile Asn Gly His Ile Asp Ser Lys Leu Ala Gly Leu Glu Gln		
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Lys Leu Gln Gly Thr Pro Ser Asn Lys Glu Asp Ala Ala Ala Arg Lys		
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Pro Leu Thr Pro Lys Pro Lys Arg Val Gln Lys Ala Ser Asp Arg Leu		
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Val Ser Ser Arg Lys Lys Leu Arg Lys Glu Asp Gly Val Arg Ala Ser		
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Glu Ala Leu Leu Lys Gln Leu Lys Gln Glu Leu Ser Leu Leu Pro Leu		
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Thr Glu Pro Ala Ile Thr Ala Asn Phe Ser Leu Phe Ala Pro Phe Gly		
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Ser Gly Cys Pro Val Asn Gly Gln Ser Gln Leu Arg Gly Ala Phe Gly		

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Lys Asn Asn Leu Ser Asn Pro Pro Thr Pro Pro Ser Ser Leu Pro Pro 4035	4040	4045
Thr Pro Pro Pro Ser Val Gln Gln Lys Met Val Asn Gly Val Thr Pro 4050	4055	4060
Ser Glu Glu Leu Gly Glu His Pro Lys Asp Ala Ala Ser Ala Arg Asp 4065	4070	4075 4080
Ser Glu Arg Ala Leu Arg Asp Thr Ser Glu Val Lys Ser Leu Asp Leu 4085	4090	4095
Leu Ala Ala Leu Pro Thr Pro Pro His Asn Gln Thr Glu Asp Val Arg 4100	4105	4110
Met Glu Ser Asp Glu Asp Ser Asp Ser Pro Asp Ser Ile Val Pro Ala 4115	4120	4125
Ser Ser Pro Glu Ser Ile Leu Gly Glu Glu Ala Pro Arg Phe Pro His 4130	4135	4140
Leu Gly Ser Gly Arg Trp Glu Gln Glu Asp Arg Ala Leu Ser Pro Val 4145	4150	4155 4160
Ile Pro Leu Ile Pro Arg Asp Ser Ile Pro Val Phe Pro Asp Thr Lys 4165	4170	4175
Pro Tyr Gly Ala Leu Gly Leu Glu Val Pro Gly Lys Leu Pro Val Thr 4180	4185	4190
Thr Trp Glu Lys Gly Lys Gly Ser Glu Val Ser Val Met Leu Thr Val 4195	4200	4205
Ser Ala Ala Ala Asp Lys Asn Leu Asn Gly Val Met Val Ala Val Ala 4210	4215	4220
Glu Leu Leu Ser Met Lys Ile Pro Asn Ser Tyr Glu Val Leu Phe Pro 4225	4230	4235 4240
Glu Ser Pro Ala Arg Gly Gly Thr Glu Pro Lys Lys Gly Glu Ala Glu 4245	4250	4255
Gly Pro Gly Gly Lys Glu Lys Gly Leu Glu Gly Lys Ser Pro Asp Thr 4260	4265	4270
Gly Pro Asp Trp Leu Lys Gln Phe Asp Ala Val Leu Ala Gly Tyr Thr 4275	4280	4285
Leu Lys Arg Gln Leu Asp Ile Leu Ser Leu Leu Lys Gln Glu Ser Pro 4290	4295	4300
Ala Pro Glu Pro Pro Thr Gln His Arg Tyr Thr Tyr Asn Val Ser Asn		

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Leu Asp Val Arg Gln Leu Ser Ala Pro Pro Pro Glu Glu Pro Ser Pro						
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Pro Pro Ser Pro Leu Ala Pro Ser Pro Ala Ser Pro Pro Thr Glu Pro						
	4340		4345		4350	
Leu Val Glu Leu Pro Thr Glu Pro Leu Ala Glu Pro Pro Val Pro Ser						
	4355		4360		4365	
Pro Leu Pro Leu Ala Ser Ser Pro Glu Ser Ala Arg Pro Lys Pro Arg						
	4370		4375		4380	
Ala Arg Pro Pro Glu Glu Gly Glu Asp Thr Arg Pro Pro Arg Leu Lys						
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Lys Trp Lys Gly Val Arg Trp Lys Arg Arg Leu Arg Gly Ala Met Leu						
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Glu Leu Phe Gly Val Asn Ser Leu Glu Val Lys Phe Arg Thr Arg Ser						
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Glu Asn Gly Val Leu Ile His Ile Gln Glu Ser Ser Asn Tyr Thr Thr						
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Val Lys Ile Lys Asn Gly Lys Val Tyr Phe Thr Ser Asp Ala Gly Ile						
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Ala Gly Lys Val Glu Arg Asn Ile Pro Glu Val Tyr Val Ala Asp Gly						
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His Trp His Thr Phe Leu Ile Gly Lys Asn Gly Thr Ala Thr Val Leu						
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Ser Val Asp Arg Ile Tyr Asn Arg Asp Ile Ile His Pro Thr Gln Asp						
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Phe Gly Gly Leu Asp Val Leu Thr Ile Ser Leu Gly Gly Ile Pro Pro						
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Asn Gln Ala His Arg Asp Ala Gln Thr Ala Gly Phe Asp Gly Cys Ile						
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Ala Ser Met Trp Tyr Gly Gly Glu Ser Leu Pro Phe Ser Gly Lys His						
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Ser Leu Ala Ser Ile Ser Lys Thr Asp Pro Ser Val Lys Ile Gly Cys						
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Arg Gly Pro Asn Ile Cys Ala Ser Asn Pro Cys Trp Gly Asp Leu Leu						
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Cys Ile Asn Gln Trp Tyr Ala Tyr Arg Cys Val Pro Pro Gly Asp Cys						
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Ala Ser His Pro Cys Gln Asn Gly Gly Ser Cys Glu Pro Gly Leu His						

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Cys Lys Ala Gly Ser Pro Ala Gly His Val Cys Val Leu Ser Gln Gly		
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Pro Glu Glu Ile Ser Leu Pro Leu Trp Ala Val Pro Ala Ile Val Gly		
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Ser Cys Ala Thr Val Leu Ala Leu Leu Val Leu Ser Leu Ile Leu Cys		
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Asn Gln Cys Arg Gly Lys Lys Ala Lys Asn Pro Lys Glu Glu Lys Lys		
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	4725	4730 4735
Pro Asp Asn Ile Pro Pro Tyr Gly Asp Asp Met Thr Val Arg Lys Gln		
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Pro Glu Gly Asn Pro Lys Pro Asp Ile Ile Glu Arg Glu Asn Pro Tyr		
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Leu Ile Tyr Asp Glu Thr Asp Ile Pro His Asn Ser Glu Thr Ile Pro		
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Ser Ala Pro Leu Ala Ser Pro Glu Gln Glu Ile Glu His Tyr Asp Ile		
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Asp Asn Ala Ser Ser Ile Ala Pro Ser Asp Ala Asp Ile Ile Gln His		
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Tyr Lys Gln Phe Arg Ser His Thr Pro Lys Phe Ser Ile Gln Arg His		
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Ser Leu Thr Tyr Gln Pro Ser Tyr Gly Gln Gly Leu Arg Thr Ser Ser		
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Leu Ser His Ser Ala Cys Pro Thr Pro Asn Pro Leu Ser Arg His Ser		
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Pro Ala Pro Phe Ser Lys Ser Ser Thr Phe Tyr Arg Asn Ser Pro Ala		
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Gly Asp Thr Cys Gln Pro Gly Ile Phe Asn Tyr Ala Thr Arg Leu Gly		

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 Asp Gly Ile Pro Ala Pro Glu Ser Ser Ser Asp Ser Asp Ser His Glu
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 Ser Phe Thr Cys Ser Glu Met Glu Tyr Asp Arg Glu Lys Pro Met Val
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Asp Leu Ala Leu Ala Pro Ala Ser Ser Ala Gly Pro Gly Pro Gly Leu
          35                               40                               45

Ser Leu Gly Pro Gly Pro Ser Phe Gly Phe Ser Pro Gly Pro Thr Pro
          50                               55                               60

Thr Pro Glu Pro Thr Thr Ser Gly Leu Ala Gly Gly Ala Ala Ser His
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Gly Pro Ser Pro Phe Pro Arg Pro Trp Ala Pro His Ala Leu Pro Phe
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Phe	Gly	Ala	His	Val	Arg	Arg	Pro	Val	Gly	Ala	Leu	Leu	Ala	Ala	Leu		
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Cys	Gln	Phe	Gly	Leu	Leu	Pro	Leu	Leu	Ala	Phe	Leu	Leu	Ala	Leu	Ala		
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Leu	Cys	Ser	Thr	Leu	Ile	Pro	Ile	Gly	Leu	Gly	Val	Phe	Ile	Arg	Tyr		
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Lys	Tyr	Ser	Arg	Val	Ala	Asp	Tyr	Ile	Val	Lys	Val	Arg	Pro	Val	Ser		
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Val	Ile	Ala	Ile	Phe	Met	Pro	Leu	Ala	Gly	Tyr	Ala	Ser	Gly	Tyr	Gly		
305					310					315					320		
Leu	Ala	Thr	Leu	Phe	His	Leu	Pro	Pro	Asn	Cys	Lys	Arg	Thr	Val	Cys		
				325					330					335			
Leu	Glu	Thr	Gly	Ser	Gln	Asn	Val	Gln	Leu	Cys	Thr	Ala	Ile	Leu	Lys		
			340					345					350				
Leu	Ala	Phe	Pro	Pro	Gln	Phe	Ile	Gly	Ser	Met	Tyr	Met	Phe	Pro	Leu		
	355						360					365					
Leu	Tyr	Ala	Leu	Phe	Gln	Ser	Ala	Glu	Ala	Gly	Ile	Phe	Val	Leu	Ile		
	370					375					380						
Tyr	Lys	Met	Tyr	Gly	Ser	Glu	Met	Leu	His	Lys	Arg	Asp	Pro	Leu	Asp		
385					390					395					400		

Glu Asp Glu Asp Thr Asp Ile Ser Tyr Lys Lys Leu Lys Glu Glu Glu
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Met Ala Asp Thr Ser Tyr Gly Thr Val Lys Ala Glu Asn Ile Ile Met
 420 425 430

Met Glu Thr Ala Gln Thr Ser Leu
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<210> 115
 <211> 2313
 <212> DNA
 <213> Homo sapiens

<400> 115
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 <211> 748
 <212> PRT
 <213> Homo sapiens

<400> 116
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 Glu Lys Lys Asp Arg Thr Tyr Pro Val Gly Glu Lys Leu Arg Asn Ala
 35 40 45
 Phe Arg Cys Ser Ser Ala Lys Ile Lys Ala Val Val Phe Gly Leu Leu
 50 55 60
 Pro Val Leu Ser Trp Leu Pro Lys Tyr Lys Ile Lys Asp Tyr Ile Ile
 65 70 75 80
 Pro Asp Leu Leu Gly Gly Leu Ser Gly Gly Ser Ile Gln Val Pro Gln
 85 90 95
 Gly Met Ala Phe Ala Leu Leu Ala Asn Leu Pro Ala Val Asn Gly Leu
 100 105 110
 Tyr Ser Ser Phe Phe Pro Leu Leu Thr Tyr Phe Phe Leu Gly Gly Val
 115 120 125
 His Gln Met Val Pro Gly Thr Phe Ala Val Ile Ser Ile Leu Val Gly
 130 135 140
 Asn Ile Cys Leu Gln Leu Ala Pro Glu Ser Lys Phe Gln Val Phe Asn
 145 150 155 160
 Asn Ala Thr Asn Glu Ser Tyr Val Asp Thr Ala Ala Met Glu Ala Glu
 165 170 175
 Arg Leu His Val Ser Ala Thr Leu Ala Cys Leu Thr Ala Ile Ile Gln
 180 185 190
 Met Gly Leu Gly Phe Met Gln Phe Gly Phe Val Ala Ile Tyr Leu Ser
 195 200 205
 Glu Ser Phe Ile Arg Gly Phe Met Thr Ala Ala Gly Leu Gln Ile Leu
 210 215 220
 Ile Ser Val Leu Lys Tyr Ile Phe Gly Leu Thr Ile Pro Ser Tyr Thr
 225 230 235 240
 Gly Pro Gly Ser Ile Val Phe Val Ser Leu Gly Met Cys Lys Asn Leu
 245 250 255
 Pro His Thr Asn Ile Ala Ser Leu Ile Phe Ala Leu Ile Ser Gly Ala
 260 265 270

Phe Leu Val Leu Val Lys Glu Leu Asn Ala Arg Tyr Met His Lys Ile
275 280 285
Arg Phe Pro Ile Pro Thr Glu Met Ile Val Val Arg Thr Leu Phe Arg
290 295 300
Ala Gly Cys Lys Met Pro Lys Lys Tyr His Met Gln Ile Val Gly Glu
305 310 315 320
Ile Gln Leu Gly Arg Phe Pro Thr Pro Val Ser Pro Val Val Ser Gln
325 330 335
Trp Lys Asp Met Ile Gly Thr Ala Phe Ser Leu Ala Ile Val Ser Tyr
340 345 350
Val Ile Asn Leu Ala Met Gly Arg Thr Leu Ala Asn Lys His Gly Tyr
355 360 365
Asp Val Asp Ser Asn Gln Glu Met Ile Ala Leu Gly Cys Ser Asn Phe
370 375 380
Phe Gly Ser Phe Phe Lys Ile His Val Ile Cys Cys Ala Leu Ser Val
385 390 395 400
Thr Leu Ala Val Asp Gly Ala Gly Gly Lys Ser Gln Val Ser Leu Val
405 410 415
Leu Gly Glu Leu Ser Glu Leu Pro Phe Leu Leu Thr Thr Gly Phe Ala
420 425 430
Leu Arg Val Leu Arg Cys Leu Ser Val Leu Gly Ala Leu Ile Ala Val
435 440 445
Asn Leu Lys Asn Ser Leu Lys Gln Leu Thr Asp Pro Tyr Tyr Leu Trp
450 455 460
Arg Lys Ser Lys Leu Asp Gln Cys Ile Trp Val Val Ser Phe Leu Ser
465 470 475 480
Ser Phe Phe Leu Ser Leu Pro Tyr Gly Val Ala Val Gly Val Ala Phe
485 490 495
Ser Val Leu Val Val Val Phe Gln Thr Gln Ser Arg Asn Gly Tyr Ala
500 505 510
Leu Ala Gln Val Met Asp Thr Asp Ile Tyr Val Asn Pro Lys Thr Tyr
515 520 525
Asn Arg Val Gln Asp Ile Gln Gly Ile Lys Ile Ile Thr Tyr Cys Ser
530 535 540
Pro Leu Tyr Phe Ala Asn Ser Glu Ile Phe Arg Gln Lys Val Ile Ala
545 550 555 560
Lys Val Arg Leu Ser Pro Trp Arg Pro Glu Ala Leu Asp Arg Glu Trp
565 570 575

Pro Glu Asn Gly Ser Arg Arg Ala Val Gly Pro Asn Asn Asn Gln Thr
 580 585 590
 Pro Ala Asn Gly Thr Ser Val Ser Tyr Ile Thr Phe Ser Pro Asp Ser
 595 600 605
 Ser Ser Pro Ala Gln Ser Glu Pro Pro Ala Ser Ala Glu Ala Pro Gly
 610 615 620
 Glu Pro Ser Asp Met Leu Ala Ser Val Pro Pro Phe Val Thr Phe His
 625 630 635 640
 Thr Leu Ile Leu Asp Met Ser Gly Val Ser Phe Val Asp Leu Met Gly
 645 650 655
 Ile Lys Ala Leu Ala Lys Leu Ser Ser Thr Tyr Gly Lys Ile Gly Val
 660 665 670
 Lys Val Phe Leu Val Asn Ile His Ala Gln Val Tyr Asn Asp Ile Ser
 675 680 685
 His Gly Gly Val Phe Glu Asp Gly Ser Leu Gly Cys Lys His Val Phe
 690 695 700
 Pro Ser Ile His Asp Ala Val Leu Phe Ala Gln Leu Ile Gln Leu Pro
 705 710 715 720
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 725 730 735
 Val Gln Ala Gly Gly Ile Thr His Leu Ser Leu Tyr
 740 745

<210> 117
 <211> 1335
 <212> DNA
 <213> Homo sapiens

<400> 117
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<210> 118
 <211> 384
 <212> PRT
 <213> Homo sapiens

<400> 118

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			20					25					30		
Gln	Ile	Lys	Asn	Leu	Leu	Gly	Leu	Gln	Asn	Ile	Pro	Arg	Pro	Phe	Phe
		35					40					45			
Leu	Gln	Val	Tyr	His	Thr	Phe	Leu	Arg	Ile	Ala	Glu	Thr	Arg	Val	Gly
	50					55					60				
Asp	Ala	Val	Leu	Gly	Leu	Val	Cys	Met	Leu	Leu	Leu	Val	Leu	Lys	
65					70					75				80	
Leu	Met	Arg	Asp	His	Val	Pro	Pro	Val	His	Pro	Glu	Met	Pro	Pro	Gly
				85					90					95	
Val	Arg	Leu	Ser	Arg	Gly	Leu	Val	Trp	Ala	Ala	Thr	Thr	Ala	Arg	Asn
		100						105					110		
Ala	Leu	Val	Val	Ser	Phe	Ala	Ala	Leu	Val	Ala	Tyr	Ser	Phe	Glu	Val
	115						120					125			
Thr	Gly	Tyr	Gln	Pro	Phe	Ile	Leu	Thr	Gly	Glu	Thr	Ala	Glu	Gly	Leu
	130					135					140				
Pro	Pro	Val	Arg	Ile	Pro	Pro	Phe	Ser	Val	Thr	Thr	Ala	Asn	Gly	Thr
145				150						155				160	
Ile	Ser	Phe	Thr	Glu	Met	Val	Gln	Asp	Met	Gly	Ala	Gly	Leu	Ala	Val
			165					170					175		
Val	Pro	Leu	Met	Gly	Leu	Leu	Glu	Ser	Ile	Ala	Val	Ala	Lys	Ala	Phe
		180						185					190		
Ala	Ser	Gln	Asn	Asn	Tyr	Arg	Ile	Asp	Ala	Asn	Gln	Glu	Leu	Leu	Ala
	195						200					205			
Ile	Gly	Leu	Thr	Asn	Met	Leu	Gly	Ser	Leu	Val	Ser	Ser	Tyr	Pro	Val
	210					215					220				
Thr	Gly	Ser	Phe	Gly	Arg	Thr	Ala	Val	Asn	Ala	Gln	Ser	Gly	Val	Cys

225		230		235		240									
Thr	Pro	Ala	Gly	Gly	Leu	Val	Thr	Gly	Val	Leu	Val	Leu	Leu	Ser	Leu
			245					250					255		
Asp	Tyr	Leu	Thr	Ser	Leu	Phe	Tyr	Tyr	Ile	Pro	Lys	Ser	Ala	Leu	Ala
		260					265					270			
Ala	Val	Ile	Ile	Met	Ala	Val	Ala	Pro	Leu	Phe	Asp	Thr	Lys	Ile	Phe
	275					280					285				
Arg	Thr	Leu	Trp	Arg	Val	Lys	Arg	Leu	Asp	Leu	Leu	Pro	Leu	Cys	Val
	290				295						300				
Thr	Phe	Leu	Leu	Cys	Phe	Trp	Glu	Val	Gln	Tyr	Gly	Ile	Leu	Ala	Gly
305				310					315						320
Ala	Leu	Val	Ser	Leu	Leu	Met	Leu	Leu	His	Ser	Ala	Ala	Arg	Pro	Glu
			325						330					335	
Thr	Lys	Val	Ser	Glu	Gly	Pro	Val	Leu	Val	Leu	Gln	Pro	Ala	Ser	Gly
		340						345					350		
Leu	Ser	Phe	Pro	Val	Leu	Cys	Pro	Pro	Leu	Pro	Ala	Val	Gln	Asp	Pro
	355					360						365			
Lys	Thr	Leu	Ser	Pro	Thr	Leu	Ser	Ser	Pro	Gln	Gly	Cys	Arg	His	Leu
370						375					380				

<210> 119

<211> 2079

<212> DNA

<213> Homo sapiens

<400> 119

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attaacctga ttcaactgctc acatthttgag agcatgaaca caagccaaac tgcattccgaa 1140
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accagtctc agactcagac tcggacatgg tcagtggaga ggagacgcca tcctatggat 2040
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<210> 120

<211> 692

<212> PRT

<213> Homo sapiens

<400> 120

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      20             25             30

Val Asn Val Asn Leu Asn Thr Arg Glu Ser Ser Arg Lys Gly Ile Pro
      35             40             45

Ile Ser Trp Tyr Tyr Leu Ile Met Gly Val Leu Gly Leu Gly Phe Ile
  50             55             60

Ala Thr Tyr Leu Pro Glu Ser Ala Met Ser Ala Tyr Leu Ala Ala Val
  65             70             75             80

Ala Leu His Ile Met Leu Ser Gln Leu Thr Phe Ile Phe Gly Ile Met
      85             90             95

Ile Ser Phe His Ala Gly Pro Ile Ser Phe Phe Tyr Asp Ile Ile Asn
    100             105             110

Tyr Cys Val Ala Leu Pro Lys Ala Asn Ser Thr Ser Ile Leu Val Phe
    115             120             125

Leu Thr Val Val Val Ala Leu Arg Ile Asn Lys Cys Ile Arg Ile Ser
    130             135             140

Phe Asn Gln Tyr Pro Ile Glu Phe Pro Met Glu Leu Phe Leu Ile Ile
    145             150             155             160

Gly Phe Thr Val Ile Ala Asn Lys Ile Ser Met Ala Thr Glu Thr Ser
    165             170             175

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Gln	Thr	Leu	Ile	Asp	Met	Ile	Pro	Tyr	Ser	Phe	Leu	Leu	Pro	Val	Thr	180	185	190	
Pro	Asp	Phe	Ser	Leu	Leu	Pro	Lys	Ile	Ile	Leu	Gln	Ala	Phe	Ser	Leu	195	200	205	
Ser	Leu	Val	Ser	Ser	Phe	Leu	Leu	Ile	Phe	Leu	Gly	Lys	Lys	Ile	Ala	210	215	220	
Ser	Leu	His	Asn	Tyr	Ser	Val	Asn	Ser	Asn	Gln	Asp	Leu	Ile	Ala	Ile	225	230	235	240
Gly	Leu	Cys	Asn	Val	Val	Ser	Ser	Phe	Phe	Arg	Ser	Cys	Val	Phe	Thr	245	250	255	
Gly	Ala	Ile	Ala	Arg	Thr	Ile	Ile	Gln	Asp	Lys	Ser	Gly	Gly	Arg	Gln	260	265	270	
Gln	Phe	Ala	Ser	Leu	Val	Gly	Ala	Gly	Val	Met	Leu	Leu	Leu	Met	Val	275	280	285	
Lys	Met	Gly	His	Phe	Phe	Tyr	Thr	Leu	Pro	Asn	Val	Asp	Met	Val	Lys	290	295	300	
Val	Pro	Leu	Lys	Glu	Glu	Glu	Ile	Phe	Ser	Leu	Phe	Asn	Ser	Ser	Asp	305	310	315	320
Thr	Asn	Leu	Gln	Gly	Gly	Lys	Ile	Cys	Arg	Cys	Phe	Cys	Asn	Cys	Asp	325	330	335	
Asp	Leu	Glu	Pro	Leu	Pro	Arg	Ile	Leu	Tyr	Thr	Glu	Arg	Phe	Glu	Asn	340	345	350	
Lys	Leu	Asp	Pro	Glu	Ala	Ser	Ser	Ile	Asn	Ile	Ile	His	Cys	Ser	His	355	360	365	
Phe	Glu	Ser	Met	Asn	Thr	Ser	Gln	Thr	Ala	Ser	Glu	Asp	Gln	Val	Pro	370	375	380	
Tyr	Thr	Val	Ser	Ser	Val	Ser	Gln	Lys	Asn	Gln	Gly	Gln	Gln	Tyr	Glu	385	390	395	400
Glu	Val	Glu	Glu	Val	Trp	Leu	Pro	Asn	Asn	Ser	Ser	Arg	Asn	Ser	Ser	405	410	415	
Pro	Gly	Leu	Pro	Asp	Val	Ala	Glu	Ser	Gln	Gly	Arg	Arg	Ser	Leu	Ile	420	425	430	
Pro	Tyr	Ser	Asp	Ala	Ser	Leu	Leu	Pro	Ser	Val	His	Thr	Ile	Ile	Leu	435	440	445	
Asp	Phe	Ser	Met	Val	His	Tyr	Val	Asp	Ser	Arg	Gly	Leu	Val	Val	Leu	450	455	460	
Arg	Gln	Ile	Cys	Asn	Ala	Phe	Gln	Asn	Ala	Asn	Ile	Leu	Ile	Leu	Ile	465	470	475	480

Ala Gly Cys His Ser Ser Ile Val Arg Ala Phe Glu Arg Asn Asp Phe
485 490 495

Phe Asp Ala Gly Ile Thr Lys Thr Gln Leu Phe Leu Ser Val His Asp
500 505 510

Ala Val Leu Phe Ala Leu Ser Arg Lys Val Ile Gly Ser Ser Glu Leu
515 520 525

Ser Ile Asp Glu Ser Glu Thr Val Ile Arg Glu Thr Tyr Ser Glu Thr
530 535 540

Asp Lys Asn Asp Asn Ser Arg Tyr Lys Met Ser Ser Ser Phe Leu Gly
545 550 555 560

Ser Gln Lys Asn Val Ser Pro Gly Phe Ile Lys Ile Gln Gln Pro Val
565 570 575

Glu Glu Glu Ser Glu Leu Asp Leu Glu Leu Glu Ser Glu Gln Glu Ala
580 585 590

Gly Leu Gly Leu Asp Leu Asp Leu Asp Arg Glu Leu Glu Pro Glu Met
595 600 605

Glu Pro Lys Ala Glu Thr Glu Thr Lys Thr Gln Thr Glu Met Glu Pro
610 615 620

Gln Pro Glu Thr Glu Pro Glu Met Glu Pro Asn Pro Lys Ser Arg Pro
625 630 635 640

Arg Ala His Thr Phe Pro Gln Gln Arg Tyr Trp Pro Met Tyr His Pro
645 650 655

Ser Met Ala Ser Thr Gln Ser Gln Thr Gln Thr Arg Thr Trp Ser Val
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Glu Arg Arg Arg His Pro Met Asp Ser Tyr Ser Pro Glu Gly Asn Ser
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Asn Glu Asp Val
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<210> 121
<211> 2210
<212> DNA
<213> Homo sapiens

<400> 121
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ccgcctgccc gagcgctgga acccgctgtg caaagagaag aaatatgatt atgataattt 420


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<210> 122
 <211> 581
 <212> PRT
 <213> Homo sapiens

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<400> 122
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Gly Arg Glu Ala Leu Leu Val Leu Leu Ala Leu Leu Ala Leu Ala Gly
      20              25              30

Leu Gly Ser Val Leu Arg Ala Gln Arg Gly Ala Gly Ala Gly Ala Ala
      35              40              45

Glu Pro Gly Pro Pro Arg Thr Pro Arg Pro Gly Arg Arg Glu Pro Val
      50              55              60

Met Pro Arg Pro Pro Val Pro Ala Asn Ala Leu Gly Ala Arg Gly Glu
      65              70              75              80

Ala Val Arg Leu Gln Leu Gln Gly Glu Glu Leu Arg Leu Gln Glu Glu
      85              90              95

Ser Val Arg Leu His Gln Ile Asn Ile Tyr Leu Ser Asp Arg Ile Ser

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Leu	His	Arg	Arg	Leu	Pro	Glu	Arg	Trp	Asn	Pro	Leu	Cys	Lys	Glu	Lys
		115					120					125			
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Tyr	Asn	Glu	Ala	Trp	Ser	Thr	Leu	Leu	Arg	Thr	Val	Tyr	Ser	Val	Leu
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Glu	Thr	Ser	Pro	Asp	Ile	Leu	Leu	Glu	Glu	Val	Ile	Leu	Val	Asp	Asp
				165					170					175	
Tyr	Ser	Asp	Arg	Glu	His	Leu	Lys	Glu	Arg	Leu	Ala	Asn	Glu	Leu	Ser
			180					185					190		
Gly	Leu	Pro	Lys	Val	Arg	Leu	Ile	Arg	Ala	Asn	Lys	Arg	Glu	Gly	Leu
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Val	Arg	Ala	Arg	Leu	Leu	Gly	Ala	Ser	Ala	Ala	Arg	Gly	Asp	Val	Leu
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Thr	Phe	Leu	Asp	Cys	His	Cys	Glu	Cys	His	Glu	Gly	Trp	Leu	Glu	Pro
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Leu	Leu	Gln	Arg	Ile	His	Glu	Glu	Glu	Ser	Ala	Val	Val	Cys	Pro	Val
				245					250					255	
Ile	Asp	Val	Ile	Asp	Trp	Asn	Thr	Phe	Glu	Tyr	Leu	Gly	Asn	Ser	Gly
			260					265					270		
Glu	Pro	Gln	Ile	Gly	Gly	Phe	Asp	Trp	Arg	Leu	Val	Phe	Thr	Trp	His
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Thr	Val	Pro	Glu	Arg	Glu	Arg	Ile	Arg	Met	Gln	Ser	Pro	Val	Asp	Val
	290					295					300				
Ile	Arg	Ser	Pro	Thr	Met	Ala	Gly	Gly	Leu	Phe	Ala	Val	Ser	Lys	Lys
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Tyr	Phe	Glu	Tyr	Leu	Gly	Ser	Tyr	Asp	Thr	Gly	Met	Glu	Val	Trp	Gly
				325					330					335	
Gly	Glu	Asn	Leu	Glu	Phe	Ser	Phe	Arg	Ile	Trp	Gln	Cys	Gly	Gly	Val
			340					345					350		
Leu	Glu	Thr	His	Pro	Cys	Ser	His	Val	Gly	His	Val	Phe	Pro	Lys	Gln
		355					360					365			
Ala	Pro	Tyr	Ser	Arg	Asn	Lys	Ala	Leu	Ala	Asn	Ser	Val	Arg	Ala	Ala
	370					375					380				
Glu	Val	Trp	Met	Asp	Glu	Phe	Lys	Glu	Leu	Tyr	Tyr	His	Arg	Asn	Pro
385						390					395				400
Arg	Ala	Arg	Leu	Glu	Pro	Phe	Gly	Asp	Val	Thr	Glu	Arg	Lys	Gln	Leu

405	410	415
Arg Asp Lys Leu Gln Cys Lys Asp	Phe Lys Trp Phe Leu Glu Thr Val	
420	425	430
Tyr Pro Glu Leu His Val Pro Glu Asp Arg Pro Gly Phe Phe Gly Met		
435	440	445
Leu Gln Asn Lys Gly Leu Thr Asp Tyr Cys Phe Asp Tyr Asn Pro Pro		
450	455	460
Asp Glu Asn Gln Ile Val Gly His Gln Val Ile Leu Tyr Leu Cys His		
465	470	475
Gly Met Gly Gln Asn Gln Phe Phe Glu Tyr Thr Ser Gln Lys Glu Ile		
485	490	495
Arg Tyr Asn Thr His Gln Pro Glu Gly Cys Ile Ala Val Glu Ala Gly		
500	505	510
Met Asp Thr Leu Ile Met His Leu Cys Glu Glu Thr Ala Pro Glu Asn		
515	520	525
Gln Lys Phe Ile Leu Gln Glu Asp Gly Ser Leu Phe His Glu Gln Ser		
530	535	540
Lys Lys Cys Val Gln Ala Ala Arg Lys Glu Ser Ser Asp Ser Phe Val		
545	550	555
Pro Leu Leu Arg Asp Cys Thr Asn Ser Asp His Gln Lys Trp Phe Phe		
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Lys Glu Arg Met Leu		
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<210> 123

<211> 2030

<212> DNA

<213> Homo sapiens

<400> 123

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<210> 124
 <211> 533
 <212> PRT
 <213> Homo sapiens

<400> 124

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			20					25					30		
Glu	Ser	His	Gly	Ser	Leu	Gly	Ala	Gln	Ala	Ser	Pro	Ala	Ser	Ala	Ala
		35					40					45			
Ala	Ala	Glu	Gly	Ser	Ala	Thr	Arg	Arg	Ala	Arg	Ala	Ala	Thr	Ser	Arg
		50				55					60				
Ala	Ala	Arg	Ser	Arg	Arg	Gln	Pro	Gly	Pro	Gly	Ala	Asp	His	Pro	Gln
	65				70					75					80
Ala	Gly	Ala	Pro	Gly	Gly	Lys	Arg	Ala	Ala	Arg	Lys	Trp	Arg	Cys	Ala
				85					90					95	
Gly	Gln	Val	Thr	Ile	Gln	Gly	Pro	Ala	Pro	Pro	Arg	Pro	Arg	Ala	Gly
			100					105					110		
Arg	Arg	Asp	Glu	Ala	Gly	Gly	Ala	Arg	Ala	Ala	Pro	Leu	Leu	Leu	Pro
		115					120					125			
Pro	Pro	Pro	Ala	Ala	Met	Glu	Thr	Gly	Lys	Asp	Gly	Ala	Arg	Arg	Gly
	130					135					140				
Thr	Gln	Ser	Pro	Glu	Arg	Lys	Arg	Arg	Ser	Pro	Val	Pro	Arg	Ala	Pro
145					150					155					160

Ser Thr Lys Leu Arg Pro Ala Ala Ala Arg Ala Met Asp Pro Val
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 195 200 205
 Gly Arg Gly Ser Tyr Gly Val Val Tyr Glu Ala Val Ala Gly Arg Ser
 210 215 220
 Gly Ala Arg Val Ala Val Lys Lys Ile Arg Cys Asp Ala Pro Glu Asn
 225 230 235 240
 Val Glu Leu Ala Leu Ala Glu Phe Trp Ala Leu Thr Ser Leu Lys Arg
 245 250 255
 Arg His Gln Asn Val Val Gln Phe Glu Glu Cys Val Leu Gln Arg Asn
 260 265 270
 Gly Leu Ala Gln Arg Met Ser His Gly Asn Lys Ser Ser Gln Leu Tyr
 275 280 285
 Leu Arg Leu Val Glu Thr Ser Leu Lys Glu Arg Ile Leu Gly Tyr Ala
 290 295 300
 Glu Glu Pro Cys Tyr Leu Trp Phe Val Met Glu Phe Cys Glu Gly Gly
 305 310 315 320
 Asp Leu Asn Gln Tyr Val Leu Ser Arg Arg Pro Asp Pro Ala Thr Asn
 325 330 335
 Lys Ser Phe Met Leu Gln Leu Thr Ser Ala Ile Ala Phe Leu His Lys
 340 345 350
 Asn His Ile Val His Arg Asp Leu Lys Pro Asp Asn Ile Leu Ile Thr
 355 360 365
 Glu Arg Ser Gly Thr Pro Ile Leu Lys Val Ala Asp Phe Gly Leu Ser
 370 375 380
 Lys Val Cys Ala Gly Leu Ala Pro Arg Gly Lys Glu Gly Asn Gln Asp
 385 390 395 400
 Asn Lys Asn Val Asn Val Asn Lys Tyr Trp Leu Ser Ser Ala Cys Gly
 405 410 415
 Ser Asp Phe Tyr Met Ala Pro Glu Val Trp Glu Gly His Tyr Thr Ala
 420 425 430
 Lys Ala Asp Ile Phe Ala Leu Gly Ile Ile Ile Trp Ala Met Ile Glu
 435 440 445
 Arg Ile Thr Phe Ile Asp Ser Glu Thr Lys Lys Glu Leu Leu Gly Thr
 450 455 460

Tyr Ile Lys Gln Gly Thr Glu Ile Val Pro Val Gly Glu Ala Leu Leu
 465 470 475 480
 Glu Asn Pro Lys Met Glu Leu His Ile Pro Gln Lys Arg Arg Thr Ser
 485 490 495
 Met Ser Glu Gly Ile Lys Gln Leu Leu Lys Asp Met Leu Ala Ala Asn
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 Pro Gln Asp Arg Pro Asp Ala Phe Glu Leu Glu Thr Arg Met Asp Gln
 515 520 525
 Val Thr Cys Ala Ala
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<210> 125
 <211> 3331
 <212> DNA
 <213> Homo sapiens

<400> 125
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<210> 126

<211> 545

<212> PRT

<213> Homo sapiens

<400> 126

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Leu Leu Gly Ala Ala Cys Leu Ile Pro Arg Ser Ala Gln Val Arg Arg
      20             25             30

Leu Ala Arg Cys Pro Ala Thr Cys Ser Cys Thr Lys Glu Ser Ile Ile
      35             40             45

Cys Val Gly Ser Ser Trp Val Pro Arg Ile Val Pro Gly Asp Ile Ser
      50             55             60

Ser Leu Ser Leu Val Asn Gly Thr Phe Ser Glu Ile Lys Asp Arg Met
      65             70             75             80

Phe Ser His Leu Pro Ser Leu Gln Leu Leu Leu Leu Asn Ser Asn Ser
      85             90             95

Phe Thr Ile Ile Arg Asp Asp Ala Phe Ala Gly Leu Phe His Leu Glu
      100            105            110

Tyr Leu Phe Ile Glu Gly Asn Lys Ile Glu Thr Ile Ser Arg Asn Ala
      115            120            125

Phe Arg Gly Leu Arg Asp Leu Thr His Leu Ser Leu Ala Asn Asn His
      130            135            140

Ile Lys Ala Leu Pro Arg Asp Val Phe Ser Asp Leu Asp Ser Leu Ile

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Glu Gln Ile Leu Arg Gly Asn Lys Phe Glu Cys Asp Cys Lys Ala Lys						
		165		170		175
Trp Leu Tyr Leu Trp Leu Lys Met Thr Asn Ser Thr Val Ser Asp Val						
		180		185		190
Leu Cys Ile Gly Pro Pro Glu Tyr Gln Glu Lys Lys Leu Asn Asp Val						
		195		200		205
Thr Ser Phe Asp Tyr Glu Cys Thr Thr Thr Asp Phe Val Val His Gln						
		210		215		220
Thr Leu Pro Tyr Gln Ser Val Ser Val Asp Thr Phe Asn Ser Lys Asn						
		225		230		235
Asp Val Tyr Val Ala Ile Ala Gln Pro Ser Met Glu Asn Cys Met Val						
		245		250		255
Leu Glu Trp Asp His Ile Glu Met Asn Phe Arg Ser Tyr Asp Asn Ile						
		260		265		270
Thr Gly Gln Ser Ile Val Gly Cys Lys Ala Ile Leu Ile Asp Asp Gln						
		275		280		285
Val Phe Val Val Val Ala Gln Leu Phe Gly Gly Ser His Ile Tyr Lys						
		290		295		300
Tyr Asp Glu Ser Trp Thr Lys Phe Val Lys Phe Gln Asp Ile Glu Val						
		305		310		315
Ser Arg Ile Ser Lys Pro Asn Asp Ile Glu Leu Phe Gln Ile Asp Asp						
		325		330		335
Glu Thr Phe Phe Val Ile Ala Asp Ser Ser Lys Ala Gly Leu Ser Thr						
		340		345		350
Val Tyr Lys Trp Asn Ser Lys Gly Phe Tyr Ser Tyr Gln Ser Leu His						
		355		360		365
Glu Trp Phe Arg Asp Thr Asp Ala Glu Phe Val Asp Ile Asp Gly Lys						
		370		375		380
Ser His Leu Ile Leu Ser Ser Arg Ser Gln Val Pro Ile Ile Leu Gln						
		385		390		395
Trp Asn Lys Ser Ser Lys Lys Phe Val Pro His Gly Asp Ile Pro Asn						
		405		410		415
Met Glu Asp Val Leu Ala Val Lys Ser Phe Arg Met Gln Asn Thr Leu						
		420		425		430
Tyr Leu Ser Leu Thr Arg Phe Ile Gly Asp Ser Arg Val Met Arg Trp						
		435		440		445
Asn Ser Lys Gln Phe Val Glu Ile Gln Ala Leu Pro Ser Arg Gly Ala						

450 455 460
 Met Thr Leu Gln Pro Phe Ser Phe Lys Asp Asn His Tyr Leu Ala Leu
 465 470 475 480
 Gly Ser Asp Tyr Thr Phe Ser Gln Ile Tyr Gln Trp Asp Lys Glu Lys
 485 490 495
 Gln Leu Phe Lys Lys Phe Lys Glu Ile Tyr Val Gln Ala Pro Arg Ser
 500 505 510
 Phe Thr Ala Val Ser Thr Asp Arg Arg Asp Phe Phe Phe Ala Ser Ser
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 Leu
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<210> 127
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 <212> DNA
 <213> Homo sapiens

<400> 127
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gctggagcca gaacactcat tcagtgggaa tgacagtgaa gattcagagc tgatgtatca 2820
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agaccc 2886

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<211> 946
<212> PRT
<213> Homo sapiens

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Thr Gly Pro Ser Pro Asp Gly Pro Ser Asp Thr Glu Ser Lys Glu Leu
35 40 45
Gly Val Pro Lys Asp Pro Leu Leu Phe Ile Gln Leu Asn Glu Leu Leu
50 55 60
Gly Trp Pro Gln Ala Leu Glu Trp Arg Glu Thr Gly Arg Trp Val Leu
65 70 75 80
Phe Glu Glu Lys Leu Glu Val Ala Ala Gly Arg Trp Ser Ala Pro His
85 90 95
Val Pro Thr Leu Ala Leu Pro Ser Leu Gln Lys Leu Arg Ser Leu Leu
100 105 110
Ala Glu Gly Leu Val Leu Leu Asp Cys Pro Ala Gln Ser Leu Leu Glu
115 120 125
Leu Val Glu Gln Val Thr Arg Val Glu Ser Leu Ser Pro Glu Leu Arg
130 135 140
Gly Gln Leu Gln Ala Leu Leu Leu Gln Arg Pro Gln His Tyr Asn Gln
145 150 155 160

Thr	Thr	Gly	Thr	Arg	Pro	Cys	Trp	Gly	Glu	Ser	Pro	Ser	Arg	Lys	Ala	
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Ser	Asp	Asn	Glu	Glu	Ala	Pro	Leu	Arg	Asp	Gln	Cys	Gln	Asn	Pro	Leu	
			180					185					190			
Arg	Gln	Lys	Leu	Pro	Pro	Gly	Ala	Glu	Ala	Gly	Thr	Val	Leu	Ala	Gly	
		195					200					205				
Glu	Leu	Gly	Phe	Leu	Ala	Gln	Pro	Leu	Gly	Ala	Phe	Val	Arg	Leu	Arg	
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Asn	Pro	Val	Val	Leu	Gly	Ser	Leu	Thr	Glu	Val	Ser	Leu	Pro	Ser	Arg	
225					230					235					240	
Phe	Phe	Cys	Leu	Leu	Leu	Gly	Pro	Cys	Met	Leu	Gly	Lys	Gly	Tyr	His	
			245						250					255		
Glu	Met	Gly	Arg	Ala	Ala	Ala	Val	Leu	Leu	Ser	Asp	Pro	His	Ser	Gln	
			260					265					270			
Gln	Phe	Gln	Trp	Ser	Val	Arg	Arg	Ala	Ser	Asn	Leu	His	Asp	Leu	Leu	
		275					280					285				
Ala	Ala	Leu	Asp	Ala	Phe	Leu	Glu	Glu	Val	Thr	Val	Leu	Pro	Pro	Gly	
	290					295					300					
Arg	Trp	Asp	Pro	Thr	Ala	Arg	Ile	Pro	Pro	Pro	Lys	Cys	Leu	Pro	Ser	
305					310					315					320	
Gln	His	Lys	Arg	Thr	Ser	Ala	Glu	Asp	Arg	His	Arg	His	Gly	Pro	His	
				325					330					335		
Ala	His	Ser	Pro	Glu	Leu	Gln	Arg	Thr	Gly	Arg	Leu	Phe	Gly	Gly	Leu	
			340					345					350			
Ile	Gln	Asp	Val	Arg	Arg	Lys	Val	Pro	Trp	Tyr	Pro	Ser	Asp	Phe	Leu	
		355					360					365				
Asp	Ala	Leu	His	Leu	Gln	Cys	Phe	Ser	Ala	Val	Leu	Tyr	Ile	Tyr	Leu	
	370					375					380					
Ala	Thr	Val	Thr	Asn	Ala	Ile	Thr	Phe	Gly	Gly	Leu	Leu	Gly	Asp	Ala	
385					390					395					400	
Thr	Asp	Gly	Ala	Gln	Gly	Val	Leu	Glu	Ser	Phe	Leu	Gly	Thr	Ala	Val	
				405					410					415		
Ala	Gly	Ala	Ala	Phe	Cys	Leu	Met	Ala	Gly	Gln	Pro	Leu	Thr	Ile	Leu	
			420					425					430			
Ser	Ser	Thr	Gly	Pro	Val	Leu	Val	Phe	Glu	Arg	Leu	Leu	Phe	Ser	Phe	
		435					440					445				
Ser	Arg	Asp	Tyr	Ser	Leu	Asp	Tyr	Leu	Pro	Phe	Arg	Leu	Trp	Val	Gly	
	450					455					460					

Ile Trp Val Ala Thr Phe Cys Leu Val Leu Val Ala Thr Glu Ala Ser
 465 470 475 480
 Val Leu Val Arg Tyr Phe Thr Arg Phe Thr Glu Glu Gly Phe Cys Ala
 485 490 495
 Leu Ile Ser Leu Ile Phe Ile Tyr Asp Ala Val Gly Lys Met Leu Asn
 500 505 510
 Leu Thr His Thr Tyr Pro Ile Gln Lys Pro Gly Ser Ser Ala Tyr Gly
 515 520 525
 Cys Leu Cys Gln Tyr Pro Gly Pro Gly Gly Asn Glu Ser Gln Trp Ile
 530 535 540
 Arg Thr Arg Pro Lys Asp Arg Asp Asp Ile Val Ser Met Asp Leu Gly
 545 550 555 560
 Leu Ile Asn Ala Ser Leu Leu Pro Pro Pro Glu Cys Thr Arg Gln Gly
 565 570 575
 Gly His Pro Arg Gly Pro Gly Cys His Thr Val Pro Asp Ile Ala Phe
 580 585 590
 Phe Ser Leu Leu Leu Phe Leu Thr Ser Phe Phe Phe Ala Met Ala Leu
 595 600 605
 Lys Cys Val Lys Thr Ser Arg Phe Phe Pro Ser Val Val Arg Lys Gly
 610 615 620
 Leu Ser Asp Phe Ser Ser Val Leu Ala Ile Leu Leu Gly Cys Gly Leu
 625 630 635 640
 Asp Ala Phe Leu Gly Leu Ala Thr Pro Lys Leu Met Val Pro Arg Glu
 645 650 655
 Phe Lys Pro Thr Leu Pro Gly Arg Gly Trp Leu Val Ser Pro Phe Gly
 660 665 670
 Ala Asn Pro Trp Trp Trp Ser Val Ala Ala Ala Leu Pro Ala Leu Leu
 675 680 685
 Leu Ser Ile Leu Ile Phe Met Asp Gln Gln Ile Thr Ala Val Ile Leu
 690 695 700
 Asn Arg Met Glu Tyr Arg Leu Gln Lys Gly Ala Gly Phe His Leu Asp
 705 710 715 720
 Leu Phe Cys Val Ala Val Leu Met Leu Leu Thr Ser Ala Leu Gly Leu
 725 730 735
 Pro Trp Tyr Val Ser Ala Thr Val Ile Ser Leu Ala His Met Asp Ser
 740 745 750
 Leu Arg Arg Glu Ser Arg Ala Cys Ala Pro Gly Glu Arg Pro Asn Phe
 755 760 765

Leu Gly Ile Arg Glu Gln Arg Leu Thr Gly Leu Val Val Phe Ile Leu
 770 775 780
 Thr Gly Ala Ser Ile Phe Leu Ala Pro Val Leu Lys Phe Ile Pro Met
 785 790 795 800
 Pro Val Leu Tyr Gly Ile Phe Leu Tyr Met Gly Val Ala Ala Leu Ser
 805 810 815
 Ser Ile Gln Phe Thr Asn Arg Val Lys Leu Leu Leu Met Pro Ala Lys
 820 825 830
 His Gln Pro Asp Leu Leu Leu Leu Arg His Val Pro Leu Thr Arg Val
 835 840 845
 His Leu Phe Thr Ala Ile Gln Leu Ala Cys Leu Gly Leu Leu Trp Ile
 850 855 860
 Ile Lys Ser Thr Pro Ala Ala Ile Ile Phe Pro Leu Met Leu Leu Gly
 865 870 875 880
 Leu Val Gly Val Arg Lys Ala Leu Glu Arg Val Phe Ser Pro Gln Glu
 885 890 895
 Leu Leu Trp Leu Asp Glu Leu Met Pro Glu Glu Glu Arg Ser Ile Pro
 900 905 910
 Glu Lys Gly Leu Glu Pro Glu His Ser Phe Ser Gly Ser Asp Ser Glu
 915 920 925
 Asp Ser Glu Leu Met Tyr Gln Pro Lys Ala Pro Glu Ile Asn Ile Ser
 930 935 940
 Val Asn
 945

<210> 129
 <211> 1083
 <212> DNA
 <213> Homo sapiens

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 aagccccgcg cgctggaggc ggcggcgggc gcggcagcga cggccccggg cctggagatg 240
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 gaagagaact cggttacaca tcacgaagtc aaatgccagg ggaaaccatt agccggaatc 420
 tacaggaaac gagaagagaa aagaaatact gggaacgcag tacagagcgc catgaagtcc 480
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 aagattgacc tcatcgatgg caaaggcagg ggtgtgattg ccaccaagca tttctcccgg 720
 ggtgcctttg tgggtggaata ccacggggac ctcatcgaga tcaccgacgc caagaaacgg 780
 gaggtctctg atgcacagga cccttccacg ggctgctaca tgtactattt tcagtatctg 840

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atcctcatcg cctccaaga catcgcggt ggggaggagc tcctgtatga ctatggggac 1020
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<210> 130
<211> 345
<212> PRT
<213> Homo sapiens

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<400> 130
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Arg Gly Cys Gly Ala Arg Cys His Gly Pro Gly Arg Ala Ala Gly Lys
      35           40           45

Lys Met Ser Lys Pro Arg Ala Leu Glu Ala Ala Ala Ala Ala Ala
      50           55           60

Thr Ala Pro Gly Leu Glu Met Val Glu Arg Arg Gly Pro Gly Arg Pro
      65           70           75           80

Arg Thr Asp Gly Glu Ser Val Phe Thr Gly Gln Ser Lys Ile Tyr Ser
      85           90           95

Tyr Met Ser Pro Asn Lys Cys Ser Gly Met Arg Phe Pro Leu Gln Glu
      100          105          110

Glu Asn Ser Val Thr His His Glu Val Lys Cys Gln Gly Lys Pro Leu
      115          120          125

Ala Gly Ile Tyr Arg Lys Arg Glu Glu Lys Arg Asn Thr Gly Asn Ala
      130          135          140

Val Gln Ser Ala Met Lys Ser Lys Lys Gln Lys Ile Lys Asp Ala Arg
      145          150          155          160

Arg Gly Pro Leu Gln Gly Lys Thr Gln Gln Asn His Lys Leu Thr Asp
      165          170          175

Phe Tyr Pro Val Arg Arg Arg Ser Arg Lys Ser Lys Ala Glu Leu Gln
      180          185          190

Ser Glu Glu Arg Lys Arg Ile Asp Glu Leu Ile Glu Ser Gly Lys Glu
      195          200          205

Glu Gly Met Lys Ile Asp Leu Ile Asp Gly Lys Gly Arg Gly Val Ile
      210          215          220

Ala Thr Lys His Phe Ser Arg Gly Ala Phe Val Val Glu Tyr His Gly
      225          230          235          240

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Asp Leu Ile Glu Ile Thr Asp Ala Lys Lys Arg Glu Ala Leu Tyr Ala
 245 250 255
 Gln Asp Pro Ser Thr Gly Cys Tyr Met Tyr Tyr Phe Gln Tyr Leu Ser
 260 265 270
 Lys Thr Tyr Cys Val Asp Ala Thr Arg Glu Thr Asn Arg Pro Gly Arg
 275 280 285
 Pro Ile Asn His Ser Lys Cys Gly Asn Cys Gln Thr Lys Leu His Asp
 290 295 300
 Ile Asp Gly Val Pro His Leu Ile Leu Ile Ala Ser Gln Asp Ile Ala
 305 310 315 320
 Ala Gly Glu Glu Leu Leu Tyr Asp Tyr Gly Asp Arg Ser Lys Ala Ser
 325 330 335
 Ile Glu Ala His Pro Trp Leu Lys His
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<210> 131
 <211> 5896
 <212> DNA
 <213> Homo sapiens

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 <222> (5662)
 <223> Where N is G or A or T or C

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<210> 132
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 <212> PRT
 <213> Homo sapiens

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Cys Val Val Ile Asn Pro Tyr Lys Gln Leu Pro Ile Tyr Thr Glu Ala
      35             40            45

Ile Val Glu Met Tyr Arg Gly Lys Lys Arg His Glu Val Pro Pro His
      50             55            60

Val Tyr Ala Val Thr Glu Gly Ala Tyr Arg Ser Met Leu Gln Asp Arg
      65             70            75            80

Glu Asp Gln Ser Ile Leu Cys Thr Gly Glu Ser Gly Ala Gly Lys Thr
      85             90            95

Glu Asn Thr Lys Lys Val Ile Gln Tyr Leu Ala His Val Ala Ser Ser
      100            105           110

Pro Lys Gly Arg Lys Glu Pro Gly Val Pro Gly Glu Leu Glu Arg Gln
      115            120           125

Leu Leu Gln Ala Asn Pro Ile Leu Glu Ala Phe Gly Asn Ala Lys Thr
      130            135           140

Val Lys Asn Asp Asn Ser Ser Arg Phe Gly Lys Phe Ile Arg Ile Asn
      145            150           155           160

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Phe	Asp	Val	Ala	Gly	Tyr	Ile	Val	Gly	Ala	Asn	Ile	Glu	Thr	Cys	Leu	165	170	175
Leu	Glu	Lys	Ser	Arg	Ala	Ile	Arg	Gln	Ala	Lys	Asp	Glu	Cys	Ser	Phe	180	185	190
His	Ile	Phe	Tyr	Gln	Leu	Leu	Gly	Gly	Ala	Gly	Glu	His	Gly	Cys	Arg	195	200	205
Glu	Leu	Leu	Leu	Glu	Pro	Cys	Ser	His	Tyr	Arg	Phe	Leu	Thr	Asn	Gly	210	215	220
Pro	Ser	Ser	Ser	Pro	Gly	Gln	Glu	Arg	Glu	Leu	Phe	Gln	Glu	Thr	Leu	225	230	235
Glu	Ser	Leu	Arg	Val	Leu	Gly	Phe	Ser	His	Glu	Glu	Ile	Ile	Ser	Met	245	250	255
Leu	Arg	Met	Val	Ser	Ala	Val	Leu	Gln	Phe	Gly	Asn	Ile	Ala	Leu	Lys	260	265	270
Arg	Glu	Arg	Asn	Thr	Asp	Gln	Ala	Thr	Met	Pro	Asp	Asn	Thr	Ala	Ala	275	280	285
Gln	Lys	Leu	Cys	Arg	Leu	Leu	Gly	Leu	Gly	Val	Thr	Asp	Phe	Ser	Arg	290	295	300
Ala	Leu	Leu	Thr	Pro	Arg	Ile	Lys	Val	Gly	Arg	Asp	Tyr	Val	Gln	Lys	305	310	315
Ala	Gln	Thr	Lys	Glu	Gln	Ala	Asp	Phe	Ala	Leu	Glu	Ala	Leu	Ala	Lys	325	330	335
Ala	Thr	Tyr	Glu	Arg	Leu	Phe	Arg	Trp	Leu	Val	Leu	Arg	Leu	Asn	Arg	340	345	350
Ala	Leu	Asp	Arg	Ser	Pro	Arg	Gln	Gly	Ala	Ser	Phe	Leu	Gly	Ile	Leu	355	360	365
Asp	Ile	Ala	Gly	Phe	Glu	Ile	Phe	Gln	Leu	Asn	Ser	Phe	Glu	Gln	Leu	370	375	380
Cys	Ile	Asn	Tyr	Thr	Asn	Glu	Lys	Leu	Gln	Gln	Leu	Phe	Asn	His	Thr	385	390	395
Met	Phe	Val	Leu	Glu	Gln	Glu	Glu	Tyr	Gln	Arg	Glu	Gly	Ile	Pro	Trp	405	410	415
Thr	Phe	Leu	Asp	Phe	Gly	Leu	Asp	Leu	Gln	Pro	Cys	Ile	Asp	Leu	Ile	420	425	430
Glu	Arg	Pro	Ala	Asn	Pro	Pro	Gly	Leu	Leu	Ala	Leu	Leu	Asp	Glu	Glu	435	440	445
Cys	Trp	Phe	Pro	Lys	Ala	Thr	Asp	Lys	Ser	Phe	Val	Glu	Lys	Val	Ala	450	455	460

Gln	Glu	Gln	Gly	Gly	His	Pro	Lys	Phe	Gln	Arg	Pro	Arg	His	Leu	Arg	465	470	475	480
Asp	Gln	Ala	Asp	Phe	Ser	Val	Leu	His	Tyr	Ala	Gly	Lys	Val	Asp	Tyr	485	490	495	
Lys	Ala	Asn	Glu	Trp	Leu	Met	Lys	Asn	Met	Asp	Pro	Leu	Asn	Asp	Asn	500	505	510	
Val	Ala	Ala	Leu	Leu	His	Gln	Ser	Thr	Asp	Arg	Leu	Thr	Ala	Glu	Ile	515	520	525	
Trp	Lys	Asp	Val	Glu	Gly	Ile	Val	Gly	Leu	Glu	Gln	Val	Ser	Ser	Leu	530	535	540	
Gly	Asp	Gly	Pro	Pro	Gly	Gly	Arg	Pro	Arg	Arg	Gly	Met	Phe	Arg	Thr	545	550	555	560
Val	Gly	Gln	Leu	Tyr	Lys	Glu	Ser	Leu	Ser	Arg	Leu	Met	Ala	Thr	Leu	565	570	575	
Ser	Asn	Thr	Asn	Pro	Ser	Phe	Val	Arg	Cys	Ile	Val	Pro	Asn	His	Glu	580	585	590	
Lys	Arg	Val	Gly	Lys	Leu	Glu	Pro	Arg	Leu	Val	Leu	Asp	Gln	Leu	Arg	595	600	605	
Cys	Asn	Gly	Val	Leu	Glu	Gly	Ile	Arg	Ile	Cys	Arg	Gln	Gly	Phe	Pro	610	615	620	
Asn	Arg	Ile	Leu	Phe	Gln	Glu	Phe	Arg	Gln	Arg	Tyr	Glu	Ile	Leu	Thr	625	630	635	640
Pro	Asn	Ala	Ile	Pro	Lys	Gly	Phe	Met	Asp	Gly	Lys	Gln	Ala	Cys	Glu	645	650	655	
Lys	Met	Ile	Gln	Ala	Leu	Glu	Leu	Asp	Pro	Asn	Leu	Tyr	Arg	Val	Gly	660	665	670	
Gln	Ser	Lys	Ile	Phe	Phe	Arg	Ala	Gly	Val	Leu	Ala	Gln	Leu	Glu	Glu	675	680	685	
Glu	Arg	Asp	Leu	Lys	Val	Thr	Asp	Ile	Ile	Val	Ser	Phe	Gln	Ala	Ala	690	695	700	
Ala	Arg	Gly	Tyr	Leu	Ala	Arg	Arg	Ala	Phe	Gln	Lys	Arg	Gln	Gln	Gln	705	710	715	720
Gln	Ser	Ala	Leu	Arg	Val	Met	Gln	Arg	Asn	Cys	Ala	Ala	Tyr	Leu	Lys	725	730	735	
Leu	Arg	His	Trp	Gln	Trp	Trp	Arg	Leu	Phe	Thr	Lys	Val	Lys	Pro	Leu	740	745	750	
Leu	Gln	Val	Thr	Arg	Gln	Asp	Glu	Val	Leu	Gln	Ala	Arg	Ala	Gln	Glu	755	760	765	

Leu Gln Lys Val Gln Glu Leu Gln Gln Gln Ser Ala Arg Glu Val Gly
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 Glu Leu Gln Gly Arg Val Thr Gln Leu Glu Glu Glu Arg Ala Arg Leu
 785 790 795 800
 Ala Glu Gln Leu Arg Ala Glu Ala Glu Leu Cys Ala Glu Ala Glu Glu
 805 810 815
 Thr Arg Gly Arg Leu Ala Ala Arg Lys Gln Glu Leu Glu Leu Val Val
 820 825 830
 Ser Glu Leu Glu Ala Arg Val Gly Glu Glu Glu Glu Cys Ser Arg Gln
 835 840 845
 Met Gln Thr Glu Lys Lys Arg Leu Gln Gln His Ile Gln Glu Leu Glu
 850 855 860
 Ala His Leu Glu Ala Glu Glu Gly Ala Arg Gln Lys Leu Gln Leu Glu
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 885 890 895
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 915 920 925
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 930 935 940
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 Arg Lys Glu Glu Glu Leu Gln Ala Ala Leu Ala Arg Ala Glu Asp Glu
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Gln Gln Glu Leu Arg Ser Lys Arg Glu Gln Glu Val Thr Glu Leu Lys
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 1125 1130 1135
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 1155 1160 1165
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 1170 1175 1180
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 Ala Gly Glu Glu Ala Arg Arg Arg Ala Ala Arg Glu Ala Glu Ala Leu
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 <212> DNA
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 <212> PRT
 <213> Homo sapiens

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 35 40 45
 Asp Pro Glu Gly Leu Phe Leu Gln Asp Asn Ile Val Ala Glu Phe Ser
 50 55 60
 Val Asp Glu Thr Gly Gln Met Ser Ala Thr Ala Lys Gly Arg Val Arg
 65 70 75 80
 Leu Leu Asn Asn Trp Asp Val Cys Ala Asp Met Val Gly Thr Phe Thr
 85 90 95
 Asp Thr Glu Asp Pro Ala Lys Phe Lys Met Lys Tyr Trp Gly Val Ala
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 Ser Phe Leu Gln Lys Gly Asn Asp Asp His Trp Ile Val Asp Thr Asp
 115 120 125
 Tyr Asp Thr Tyr Ala Val Gln Tyr Ser Cys Arg Leu Leu Asn Leu Asp
 130 135 140
 Gly Thr Cys Ala Asp Ser Tyr Ser Phe Val Phe Ser Arg Asp Pro Asn
 145 150 155 160

Gly Leu Pro Pro Glu Ala Gln Lys Ile Val Arg Gln Arg Gln Glu Glu
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Leu Cys Leu Ala Arg Gln Tyr Arg Leu Ile Val His Asn Gly Tyr Cys
180 185 190

Asp Gly Arg Ser Glu Arg Asn Leu Leu
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<210> 135
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<213> Homo sapiens

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<212> PRT
<213> Homo sapiens

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 35 40 45
 Arg Ser Val Leu Ala Ala Cys Ser Gln Tyr Phe Lys Lys Leu Phe Thr
 50 55 60
 Ser Gly Ala Val Val Asp Gln Gln Asn Val Tyr Glu Ile Asp Phe Val
 65 70 75 80
 Ser Ala Glu Ala Leu Thr Ala Leu Met Asp Phe Ala Tyr Thr Ala Thr
 85 90 95
 Leu Thr Val Ser Thr Ala Asn Val Gly Asp Ile Leu Ser Ala Ala Arg
 100 105 110
 Leu Leu Glu Ile Pro Ala Val Ser His Val Cys Ala Asp Leu Leu Asp
 115 120 125
 Arg Gln Ile Leu Ala Ala Asp Ala Gly Ala Asp Ala Gly Gln Leu Asp
 130 135 140
 Leu Val Asp Gln Ile Asp Gln Arg Asn Leu Leu Arg Ala Lys Glu Tyr
 145 150 155 160
 Leu Glu Phe Phe Gln Ser Asn Pro Met Asn Ser Leu Pro Pro Ala Ala
 165 170 175
 Ala Ala Ala Ala Ala Ser Phe Pro Trp Ser Ala Phe Gly Ala Ser Asp
 180 185 190
 Asp Asp Leu Asp Ala Thr Lys Glu Ala Val Ala Ala Ala Val Ala Ala
 195 200 205
 Val Ala Ala Gly Asp Cys Asn Gly Leu Asp Phe Tyr Gly Pro Gly Pro
 210 215 220
 Pro Ala Glu Arg Pro Pro Thr Gly Asp Gly Asp Glu Gly Asp Ser Asn
 225 230 235 240
 Pro Gly Leu Trp Pro Glu Arg Asp Glu Asp Ala Pro Thr Gly Gly Leu
 245 250 255
 Phe Pro Pro Pro Val Ala Pro Pro Ala Ala Thr Gln Asn Gly His Tyr
 260 265 270
 Gly Arg Gly Gly Glu Glu Glu Ala Ala Ser Leu Ser Glu Ala Ala Pro
 275 280 285
 Glu Pro Gly Asp Ser Pro Gly Phe Leu Ser Gly Asp Ser Asp Glu Glu
 290 295 300
 Ser Arg Ala Asp Asp Lys Gly Val Met Asp Tyr Tyr Leu Lys Tyr Phe
 305 310 315 320
 Ser Gly Ala His Asp Gly Asp Val Tyr Pro Ala Trp Ser Gln Lys Val
 325 330 335

Glu Lys Lys Ile Arg Ala Lys Ala Phe Gln Lys Cys Pro Ile Cys Glu
 340 345 350
 Lys Val Ile Gln Gly Ala Gly Lys Leu Pro Arg His Ile Arg Thr His
 355 360 365
 Thr Gly Glu Lys Pro Tyr Glu Cys Asn Ile Cys Lys Val Arg Phe Thr
 370 375 380
 Arg Gln Asp Lys Leu Lys Val His Met Arg Lys His Thr Gly Glu Lys
 385 390 395 400
 Pro Tyr Leu Cys Gln Gln Cys Gly Ala Ala Phe Ala His Asn Tyr Asp
 405 410 415
 Leu Lys Asn His Met Arg Val His Thr Gly Leu Arg Pro Tyr Gln Cys
 420 425 430
 Asp Ser Cys Cys Lys Thr Phe Val Arg Ser Asp His Leu His Arg His
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 Leu Lys Lys Asp Gly Cys Asn Gly Val Pro Ser Arg Arg Gly Arg Lys
 450 455 460
 Pro Arg Val Arg Gly Gly Ala Pro Asp Pro Ser Pro Gly Ala Thr Ala
 465 470 475 480
 Thr Pro Gly Ala Pro Ala Gln Pro Ser Ser Pro Asp Ala Arg Arg Asn
 485 490 495
 Gly Gln Glu Lys His Phe Lys Asp Glu Asp Glu Asp Glu Asp Val Ala
 500 505 510
 Ser Pro Asp Gly Leu Gly Arg Leu Asn Val Ala Gly Ala Gly Gly Gly
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 Gly Asp Ser Gly Gly Gly Pro Gly Ala Ala Thr Asp Gly Asn Phe Thr
 530 535 540
 Ala Gly Leu Ala
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<210> 137

<211> 1026

<212> DNA

<213> Homo sapiens

<400> 137

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 tatcccaaaa ccatcatcac caaaatcccc gagtgtccct atggatggga agttcatcag 240
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 atcccagatt tatcacctaa aaacaagtcc tattgtggaa cccagtctga gtacaagcca 360
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cagcctgtca actactcctt ctccctgcacc taccactcca cctacttggt gaaccaggct 480
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<210> 138
<211> 300
<212> PRT
<213> Homo sapiens

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<400> 138
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Ala Lys Ser Cys Ala Pro Asn Lys Ala Asp Val Ile Leu Val Phe Cys
          20         25         30

Tyr Pro Lys Thr Ile Ile Thr Lys Ile Pro Glu Cys Pro Tyr Gly Trp
          35         40         45

Glu Val His Gln Leu Ala Leu Gly Gly Leu Cys Tyr Asn Gly Val His
          50         55         60

Glu Gly Gly Tyr Tyr Gln Phe Val Ile Pro Asp Leu Ser Pro Lys Asn
          65         70         75         80

Lys Ser Tyr Cys Gly Thr Gln Ser Glu Tyr Lys Pro Pro Ile Tyr His
          85         90         95

Phe Tyr Ser His Ile Val Ser Asn Asp Thr Thr Val Ile Val Lys Asn
          100        105        110

Gln Pro Val Asn Tyr Ser Phe Ser Cys Thr Tyr His Ser Thr Tyr Leu
          115        120        125

Val Asn Gln Ala Ala Phe Asp Gln Ser Val Asn Phe Leu Pro Lys Asn
          130        135        140

Ala Lys Phe Ser Ile Lys Lys Glu Ala Pro Phe Val Leu Glu Ala Ser
          145        150        155        160

Glu Ile Gly Ser Asp Leu Phe Ala Gly Val Glu Ala Lys Gly Leu Ser
          165        170        175

Ile Arg Phe Lys Val Val Leu Asn Ser Cys Trp Ala Thr Pro Ser Ala
          180        185        190

Asp Phe Met Tyr Pro Leu Gln Trp Gln Leu Ile Asn Lys Gly Cys Pro
          195        200        205

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Thr	Asp	Glu	Thr	Val	Leu	Val	His	Glu	Asn	Gly	Arg	Asp	His	Arg	Ala
210						215					220				
Thr	Phe	Gln	Phe	Asn	Ala	Phe	Arg	Phe	Gln	Asn	Ile	Pro	Lys	Leu	Ser
225					230					235					240
Lys	Val	Trp	Leu	His	Cys	Glu	Thr	Phe	Ile	Cys	Asp	Ser	Glu	Lys	Leu
				245					250					255	
Ser	Cys	Pro	Val	Thr	Cys	Asp	Lys	Arg	Lys	Arg	Leu	Leu	Arg	Asp	Gln
			260					265					270		
Thr	Gly	Gly	Val	Leu	Val	Val	Glu	Leu	Ser	Leu	Arg	Asn	Val	Leu	His
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His	Leu	Ile	Met	Met	Leu	Gly	Ile	Cys	Ala	Val	Leu				
290						295					300				

<210> 139
 <211> 1012
 <212> DNA
 <213> Homo sapiens

<400> 139
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 tcccaaaacc atcatcacca aaatccccga gtgtccctat ggatgggaag ttcacagct 180
 ggccctcgga gggctgtgtt acaatggggg ccacgaagga gggtactacc aatttgtgat 240
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 tatctatcac ttctacagtc acatcgtttc caatgacgcc acagtgattg taaaaaacca 360
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 aagcattagg tttaaagtgg tcttgaacag ctgttggggc accccctcgg ctgacttcat 660
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 agtcctgggc gtggagctct ccctgcggag caggggattt tccagtctct atagcttctc 960
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<210> 140
 <211> 329
 <212> PRT
 <213> Homo sapiens

<400> 140
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 20 25 30

Tyr Pro Lys Thr Ile Ile Thr Lys Ile Pro Glu Cys Pro Tyr Gly Trp
 35 40 45
 Glu Val His Gln Leu Ala Leu Gly Gly Leu Cys Tyr Asn Gly Val His
 50 55 60
 Glu Gly Gly Tyr Tyr Gln Phe Val Ile Pro Asp Leu Ser Pro Lys Asn
 65 70 75 80
 Lys Ser Tyr Cys Gly Thr Gln Ser Glu Tyr Lys Pro Pro Ile Tyr His
 85 90 95
 Phe Tyr Ser His Ile Val Ser Asn Asp Ala Thr Val Ile Val Lys Asn
 100 105 110
 Gln Pro Val Asn Tyr Ser Phe Ser Cys Thr Tyr His Ser Thr Tyr Leu
 115 120 125
 Val Asn Gln Ala Ala Phe Asp Gln Arg Val Ala Thr Val His Val Lys
 130 135 140
 Asn Gly Ser Met Gly Thr Phe Glu Ser Gln Leu Ser Leu Asn Phe Tyr
 145 150 155 160
 Thr Asn Ala Lys Phe Ser Ile Lys Lys Glu Ala Pro Phe Val Leu Glu
 165 170 175
 Ala Ser Glu Ile Gly Ser Asp Leu Phe Ala Gly Val Glu Ala Lys Gly
 180 185 190
 Leu Ser Ile Arg Phe Lys Val Val Leu Asn Ser Cys Trp Ala Thr Pro
 195 200 205
 Ser Ala Asp Phe Met Tyr Pro Leu Gln Trp Gln Leu Ile Asn Lys Gly
 210 215 220
 Cys Pro Thr Asp Glu Thr Val Leu Val His Glu Asn Gly Arg Asp His
 225 230 235 240
 Arg Ala Thr Phe Gln Phe Asn Ala Phe Arg Phe Gln Asn Ile Pro Lys
 245 250 255
 Leu Ser Lys Val Trp Leu His Cys Glu Thr Phe Ile Cys Asp Ser Glu
 260 265 270
 Lys Leu Ser Cys Pro Val Thr Cys Asp Lys Arg Lys Arg Leu Leu Arg
 275 280 285
 Asp Gln Thr Gly Gly Val Leu Val Val Glu Leu Ser Leu Arg Ser Arg
 290 295 300
 Gly Phe Ser Ser Leu Tyr Ser Phe Ser Asp Val Leu His His Leu Ile
 305 310 315 320
 Met Met Leu Gly Ile Cys Ala Val Leu
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<210> 141
 <211> 1012
 <212> DNA
 <213> Homo sapiens

<400> 141
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 ggccctcgga gggctgtgtt acaatgggggt ccacgaagga ggttactacc aatttgatgat 240
 cccagattta tcacctaaaa acaagtccta ttgtggaacc cagtctgagt acaagccacc 300
 tatctatcac ttctacagtc acatcgtttc caatgacacc acagtgattg taaaaacca 360
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 ctttgaccag agagtggcca ctgttcacgt gaagaacggg agcatgggca catttgagag 480
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<210> 142
 <211> 329
 <212> PRT
 <213> Homo sapiens

<400> 142
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 20 25 30
 Tyr Pro Lys Thr Ile Ile Thr Lys Ile Pro Glu Cys Pro Tyr Gly Trp
 35 40 45
 Glu Val His Gln Leu Ala Leu Gly Gly Leu Cys Tyr Asn Gly Val His
 50 55 60
 Glu Gly Gly Tyr Tyr Gln Phe Val Ile Pro Asp Leu Ser Pro Lys Asn
 65 70 75 80
 Lys Ser Tyr Cys Gly Thr Gln Ser Glu Tyr Lys Pro Pro Ile Tyr His
 85 90 95
 Phe Tyr Ser His Ile Val Ser Asn Asp Thr Thr Val Ile Val Lys Asn
 100 105 110
 Gln Pro Val Asn Tyr Ser Phe Ser Cys Thr Tyr His Ser Thr Tyr Leu
 115 120 125
 Val Asn Gln Ala Ala Phe Asp Gln Arg Val Ala Thr Val His Val Lys

130	135	140
Asn Gly Ser Met Gly Thr Phe Glu Ser Gln Leu Ser Leu Asn Phe Tyr		
145	150	155 160
Thr Asn Ala Lys Phe Ser Ile Lys Lys Glu Ala Pro Phe Val Leu Glu		
	165	170 175
Ala Ser Glu Ile Gly Ser Asp Leu Phe Ala Gly Val Glu Ala Lys Gly		
	180	185 190
Leu Ser Ile Arg Phe Lys Val Val Leu Asn Ser Cys Trp Ala Thr Pro		
	195	200 205
Ser Ala Asp Phe Met Tyr Pro Leu Gln Trp Gln Leu Ile Asn Lys Gly		
	210	220
Cys Pro Thr Asp Glu Thr Val Leu Val His Glu Asn Gly Arg Asp His		
225	230	235 240
Arg Ala Thr Phe Gln Phe Asn Ala Phe Arg Phe Gln Asn Ile Pro Lys		
	245	250 255
Leu Ser Lys Val Trp Leu His Cys Glu Thr Phe Ile Cys Asp Ser Glu		
	260	265 270
Lys Leu Ser Cys Pro Val Thr Cys Asp Lys Arg Lys Arg Leu Leu Arg		
	275	280 285
Asp Gln Thr Gly Gly Val Leu Val Val Glu Leu Ser Leu Arg Ser Arg		
	290	295 300
Gly Phe Ser Ser Leu Tyr Ser Phe Ser Asp Val Leu His His Leu Ile		
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Met Met Leu Gly Ile Cys Ala Val Leu		
	325	

<210> 143

<211> 3909

<212> DNA

<213> Homo sapiens

<400> 143

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gctcaagttt gccattcaga aaatgaaaca gccagggaca gatgcattcc agaagcccgt 720

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<210> 144

<211> 1206

<212> PRT

<213> Homo sapiens

<400> 144

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Val	Val	Glu	Gly	Met	Asp	Ile	Ser	Thr	Arg	Ser	Lys	Asp	Pro	Gly	Ser
			20					25					30		
Ala	Glu	Arg	Thr	Ala	Gln	Lys	Arg	Lys	Phe	Pro	Ser	Pro	Pro	His	Ser
		35					40					45			
Ser	Asn	Gly	His	Ser	Pro	Gln	Asp	Thr	Ser	Thr	Ser	Pro	Ile	Lys	Lys
	50					55					60				
Lys	Lys	Lys	Pro	Gly	Leu	Leu	Asn	Ser	Asn	Asn	Lys	Glu	Gln	Ser	Glu
65					70					75					80
Leu	Arg	His	Gly	Pro	Phe	Tyr	Tyr	Met	Lys	Gln	Pro	Leu	Thr	Thr	Asp
				85					90					95	
Pro	Val	Asp	Val	Val	Pro	Gln	Asp	Gly	Arg	Asn	Asp	Phe	Tyr	Cys	Trp
			100					105					110		
Val	Cys	His	Arg	Glu	Gly	Gln	Val	Leu	Cys	Cys	Glu	Leu	Cys	Pro	Arg
		115					120					125			
Val	Tyr	His	Ala	Lys	Cys	Leu	Arg	Leu	Thr	Ser	Glu	Pro	Glu	Gly	Asp
	130					135					140				
Trp	Phe	Cys	Pro	Glu	Cys	Glu	Lys	Ile	Thr	Val	Ala	Glu	Cys	Ile	Glu
145					150					155					160
Thr	Gln	Ser	Lys	Ala	Met	Thr	Met	Leu	Thr	Ile	Glu	Gln	Leu	Ser	Tyr
				165					170					175	
Leu	Leu	Lys	Phe	Ala	Ile	Gln	Lys	Met	Lys	Gln	Pro	Gly	Thr	Asp	Ala
			180					185					190		
Phe	Gln	Lys	Pro	Val	Pro	Leu	Glu	Gln	His	Pro	Asp	Tyr	Ala	Glu	Tyr
		195					200					205			
Ile	Phe	His	Pro	Met	Asp	Leu	Cys	Thr	Leu	Glu	Lys	Asn	Ala	Lys	Lys
	210					215					220				
Lys	Met	Tyr	Gly	Cys	Thr	Glu	Ala	Phe	Leu	Ala	Asp	Ala	Lys	Trp	Ile
225					230					235					240
Leu	His	Asn	Cys	Ile	Ile	Tyr	Asn	Gly	Gly	Asn	His	Lys	Leu	Thr	Gln
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Ile	Ala	Lys	Val	Val	Ile	Lys	Ile	Cys	Glu	His	Glu	Met	Asn	Glu	Ile
			260					265					270		
Glu	Val	Cys	Pro	Glu	Cys	Tyr	Leu	Ala	Ala	Cys	Gln	Lys	Arg	Asp	Asn

275					280					285					
Trp	Phe	Cys	Glu	Pro	Cys	Ser	Asn	Pro	His	Pro	Leu	Val	Trp	Ala	Lys
290					295					300					
Leu	Lys	Gly	Phe	Pro	Phe	Trp	Pro	Ala	Lys	Ala	Leu	Arg	Asp	Lys	Asp
305					310					315					320
Gly	Gln	Val	Asp	Ala	Arg	Phe	Phe	Gly	Gln	His	Asp	Arg	Ala	Trp	Val
				325					330					335	
Pro	Ile	Asn	Asn	Cys	Tyr	Leu	Met	Ser	Lys	Glu	Ile	Pro	Phe	Ser	Val
			340					345					350		
Lys	Lys	Thr	Lys	Ser	Ile	Phe	Asn	Ser	Ala	Met	Gln	Glu	Met	Glu	Val
		355					360					365			
Tyr	Val	Glu	Asn	Ile	Arg	Arg	Lys	Phe	Gly	Val	Phe	Asn	Tyr	Ser	Pro
	370					375					380				
Phe	Arg	Thr	Pro	Tyr	Thr	Pro	Asn	Ser	Gln	Tyr	Gln	Met	Leu	Leu	Asp
385						390					395				400
Pro	Thr	Asn	Pro	Ser	Ala	Gly	Thr	Ala	Lys	Ile	Asp	Lys	Gln	Glu	Lys
				405					410					415	
Val	Lys	Leu	Asn	Phe	Asp	Met	Thr	Ala	Ser	Pro	Lys	Ile	Leu	Met	Ser
			420					425					430		
Lys	Pro	Val	Leu	Ser	Gly	Gly	Thr	Gly	Arg	Arg	Ile	Ser	Leu	Ser	Asp
		435					440					445			
Met	Pro	Arg	Ser	Pro	Met	Ser	Thr	Asn	Ser	Ser	Val	His	Thr	Gly	Ser
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465						470					475				480
Ala	Ser	Glu	Glu	Ser	Met	Asp	Phe	Leu	Asp	Lys	Ser	Thr	Ala	Ser	Pro
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Ala	Ser	Thr	Lys	Thr	Gly	Gln	Ala	Gly	Ser	Leu	Ser	Gly	Ser	Pro	Lys
			500					505						510	
Pro	Phe	Ser	Pro	Gln	Leu	Ser	Ala	Pro	Ile	Thr	Thr	Lys	Thr	Asp	Lys
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		530				535					540				
Ala	Glu	Met	Asp	Leu	Lys	Glu	Leu	Ser	Glu	Ser	Val	Gln	Gln	Gln	Ser
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Thr	Pro	Val	Pro	Leu	Ile	Ser	Pro	Lys	Arg	Gln	Ile	Arg	Ser	Arg	Phe
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Gln	Leu	Asn	Leu	Asp	Lys	Thr	Ile	Glu	Ser	Cys	Lys	Ala	Gln	Leu	Gly

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Ile	Asn	Glu	Ile	Ser	Glu	Asp	Val	Tyr	Thr	Ala	Val	Glu	His	Ser	Asp
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Glu	Gly	Cys	Gln	Met	Asp	Lys	Glu	Pro	Ser	Ala	Val	Lys	Lys	Lys	Pro
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Lys	Pro	Thr	Asn	Pro	Val	Glu	Ile	Lys	Glu	Glu	Leu	Lys	Ser	Thr	Ser
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Pro	Ala	Ser	Glu	Lys	Ala	Asp	Pro	Gly	Ala	Val	Lys	Asp	Lys	Ala	Ser
		675					680					685			
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Pro	Ile	Lys	Asp	Lys	Leu	Lys	Gly	Lys	Asp	Glu	Thr	Asp	Ser	Pro	Thr
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Val	His	Leu	Gly	Leu	Asp	Ser	Asp	Ser	Glu	Ser	Glu	Leu	Val	Ile	Asp
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Leu	Gly	Glu	Asp	His	Ser	Gly	Arg	Glu	Gly	Arg	Lys	Asn	Lys	Lys	Glu
			740					745					750		
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		755					760					765			
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Thr	Ser	Ser	Thr	Val	Thr	Val	Thr	Ala	Pro	Ala	Pro	Ala	Ala	Thr	Gly
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Tyr	Gln	Thr	Arg	Gln	Ala	Val	Lys	Ala	Val	Gln	Gln	Lys	Glu	Ile	Thr

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Gln Ser Pro	Ser Thr Ser Thr Ile Thr Leu Val Thr Ser Thr Gln Ser				
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Ser Pro Leu Val Thr Ser Ser Gly Ser Met Ser Thr Leu Val Ser Ser					
	915		920		925
Val Asn Ala Asp Leu Pro Ile Ala Thr Ala Ser Ala Asp Val Ala Ala					
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Asp Ile Ala Lys Tyr Thr Ser Lys Met Met Asp Ala Ile Lys Gly Thr					
	945		950		955
Met Thr Glu Ile Tyr Asn Asp Leu Ser Lys Asn Thr Thr Gly Ser Thr					
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					975
Ile Ala Glu Ile Arg Arg Leu Arg Ile Glu Ile Glu Lys Leu Gln Trp					
			980		985
					990
Leu His Gln Gln Glu Leu Ser Glu Met Lys His Asn Leu Glu Leu Thr					
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					1005
Met Ala Glu Met Arg Gln Ser Leu Glu Gln Glu Arg Asp Arg Leu Ile					
			1010		1015
					1020
Ala Glu Val Lys Lys Gln Leu Glu Leu Glu Lys Gln Gln Ala Val Asp					
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					1035
					1040
Glu Thr Lys Lys Lys Gln Trp Cys Ala Asn Cys Lys Lys Glu Ala Ile					
			1045		1050
					1055
Phe Tyr Cys Cys Trp Asn Thr Ser Tyr Cys Asp Tyr Pro Cys Gln Gln					
			1060		1065
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Ala His Trp Pro Glu His Met Lys Ser Cys Thr Gln Ser Ala Thr Ala					
			1075		1080
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Pro Gln Gln Glu Ala Asp Ala Glu Val Asn Thr Glu Thr Leu Asn Lys					
			1090		1095
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Ser Ser Gln Gly Ser Ser Ser Ser Thr Gln Ser Ala Pro Ser Glu Thr					
			1105		1110
					1115
					1120
Ala Ser Ala Ser Lys Glu Lys Glu Thr Ser Ala Glu Lys Ser Lys Glu					
			1125		1130
					1135
Ser Gly Ser Thr Leu Asp Leu Ser Gly Ser Arg Glu Thr Pro Ser Ser					
			1140		1145
					1150
Ile Leu Leu Gly Ser Asn Gln Gly Ser Asp His Ser Arg Ser Asn Lys					
			1155		1160
					1165
Ser Ser Trp Ser Ser Ser Asp Glu Lys Arg Gly Ser Thr Arg Ser Asp					
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<211> 1629
<212> DNA
<213> Homo sapiens

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<210> 146
<211> 490
<212> PRT
<213> Homo sapiens

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Ile Phe Ala Glu Arg Ala Tyr Ser Ala Val Val Phe Asp Ser Leu Val
35 40 45

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Cys	Gly	Gln	Cys	Lys	Phe	Ala	His	Tyr	Cys	Asp	Arg	Thr	Cys	Gln	Lys		
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Asp	Ala	Trp	Leu	Asn	His	Lys	Asn	Glu	Cys	Ser	Ala	Ile	Lys	Arg	Tyr		
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Gly	Lys	Val	Pro	Asn	Glu	Asn	Ile	Arg	Leu	Ala	Ala	Arg	Ile	Met	Trp		
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Arg	Val	Glu	Arg	Glu	Gly	Thr	Gly	Leu	Thr	Glu	Gly	Cys	Leu	Val	Ser		
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Val	Asp	Asp	Leu	Gln	Asn	His	Val	Glu	His	Phe	Gly	Glu	Glu	Glu	Gln		
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Lys	Asp	Leu	Arg	Val	Asp	Val	Asp	Thr	Phe	Leu	Gln	Tyr	Trp	Pro	Pro		
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Gln	Ser	Gln	Pro	Phe	Ser	Met	Gln	Tyr	Ile	Ser	His	Ile	Phe	Gly	Val		
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Ile	Asn	Cys	Asn	Gly	Phe	Thr	Leu	Ser	Asp	Gln	Arg	Gly	Leu	Gln	Ala		
			180					185					190				
Val	Gly	Val	Gly	Ile	Phe	Pro	Asn	Leu	Gly	Leu	Val	Asn	His	Asp	Cys		
	195						200					205					
Trp	Pro	Asn	Cys	Thr	Val	Ile	Phe	Asn	Asn	Gly	Asn	His	Glu	Ala	Val		
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Lys	Ser	Met	Phe	His	Thr	Gln	Met	Arg	Ile	Glu	Leu	Arg	Ala	Leu	Gly		
225					230					235					240		
Lys	Ile	Ser	Glu	Gly	Glu	Glu	Leu	Thr	Val	Ser	Tyr	Ile	Asp	Phe	Leu		
				245					250					255			
Asn	Val	Ser	Glu	Glu	Arg	Lys	Arg	Gln	Leu	Lys	Lys	Gln	Tyr	Tyr	Phe		
			260					265					270				
Asp	Cys	Thr	Cys	Glu	His	Cys	Gln	Lys	Lys	Leu	Lys	Asp	Asp	Leu	Phe		
		275					280					285					
Leu	Gly	Val	Lys	Asp	Asn	Pro	Lys	Pro	Ser	Gln	Glu	Val	Val	Lys	Glu		
	290					295					300						
Met	Ile	Gln	Phe	Ser	Lys	Asp	Thr	Leu	Glu	Lys	Ile	Asp	Lys	Ala	Arg		
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Glu	Lys	Gln	Glu	Pro	Val	Phe	Ala	Asp	Thr	Asn	Ile	Tyr	Met	Leu	Arg		
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355 360 365

Glu Ala Ser Phe Tyr Ala Arg Arg Met Val Asp Gly Tyr Met Lys Leu
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Tyr His Pro Asn Asn Ala Gln Leu Gly Met Ala Val Met Arg Ala Gly
385 390 395 400

Leu Thr Asn Trp His Ala Gly Asn Ile Glu Val Gly His Gly Met Ile
405 410 415

Cys Lys Ala Tyr Ala Ile Leu Leu Val Thr His Gly Pro Ser His Pro
420 425 430

Ile Thr Lys Asp Leu Glu Ala Met Arg Val Gln Thr Glu Met Glu Leu
435 440 445

Arg Met Phe Arg Gln Asn Glu Phe Met Tyr Tyr Lys Met Arg Glu Ala
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Pro Ser Pro Ala Leu Phe His Lys Lys Gln
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<210> 147
<211> 1555
<212> DNA
<213> Homo sapiens

<400> 147
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<210> 148
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 <212> PRT
 <213> Homo sapiens

<400> 148

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Ile	Phe	Ala	Asp	Arg	Ala	Tyr	Ser	Ala	Val	Val	Phe	Asp	Ser	Leu	Val	35	40	45	
Asn	Phe	Val	Cys	His	Thr	Cys	Phe	Lys	Arg	Gln	Glu	Lys	Leu	His	Arg	50	55	60	
Cys	Gly	Gln	Cys	Lys	Phe	Ala	His	Tyr	Cys	Asp	Arg	Thr	Cys	Gln	Lys	65	70	75	80
Asp	Ala	Trp	Leu	Asn	His	Lys	Asn	Glu	Cys	Ser	Ala	Ile	Lys	Arg	Tyr	85	90	95	
Gly	Lys	Val	Pro	Asn	Glu	Asn	Ile	Arg	Leu	Ala	Ala	Arg	Ile	Met	Trp	100	105	110	
Arg	Val	Glu	Arg	Glu	Gly	Thr	Gly	Leu	Thr	Glu	Gly	Cys	Leu	Val	Ser	115	120	125	
Val	Asp	Asp	Leu	Gln	Asn	His	Val	Glu	His	Phe	Gly	Glu	Glu	Glu	Gln	130	135	140	
Lys	Asp	Leu	Arg	Val	Asp	Val	Asp	Thr	Phe	Leu	Gln	Tyr	Trp	Pro	Pro	145	150	155	160
Gln	Ser	Gln	Gln	Phe	Ser	Met	Gln	Tyr	Ile	Ser	His	Ile	Phe	Gly	Val	165	170	175	
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Lys	Ser	Met	Phe	His	Thr	Gln	Met	Arg	Ile	Glu	Leu	Arg	Ala	Leu	Gly	225	230	235	240
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Leu Ile Lys Lys Arg Arg Glu Lys Asn Gln Ile Asp Ala Ile Lys Asn
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Asp Lys Gly Asp Ile Thr Ala Asp Pro Thr Glu Ile Gln Thr Thr Ile
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Glu Met Asp Lys Phe Leu Ala Thr Cys Thr Leu Pro Arg Leu Asn Gln
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<212> DNA

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<212> DNA

<213> Homo sapiens

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 Thr Asn Ser Lys Ala Ser Arg Arg Gln Lys Ile Thr Lys Ile Arg Ala
 65 70 75 80
 Glu Leu Lys Glu Ile Glu Thr Gln Lys Thr Leu Gln Lys Ile Asn Glu
 85 90 95
 Ser Arg Ser Trp Phe Phe Glu Lys Ile Asn Lys Ile Asp Arg Gln Leu
 100 105 110
 Ala Arg Pro Ile Lys Lys Lys Arg Glu Lys Asn Gln Ile Asp Ala Thr
 115 120 125
 Lys Asn Asp Lys Gly Asp Ile Thr Thr Asp Pro Thr Glu Ile Gln Thr
 130 135 140
 Thr Ile Arg Glu Tyr Tyr Gln His Phe Tyr Ala Asn Ile Leu Glu Asn
 145 150 155 160
 Leu Glu Glu Met Asp Lys Phe Leu Asp Thr Tyr Thr Leu Pro Arg Leu
 165 170 175

Arg	Gln	Thr	Glu	Ser	Gln	Ile	Met	Ser	Glu	Leu	Pro	Phe	Pro	Ile	Thr	485	490	495
Thr	Lys	Arg	Ile	Lys	Tyr	Leu	Gly	Ile	Gln	Leu	Thr	Arg	Asp	Val	Lys	500	505	510
Asp	Leu	Phe	Lys	Glu	Asn	Tyr	Lys	Pro	Leu	Leu	Glu	Ile	Lys	Glu	Asp	515	520	525
Thr	Asn	Lys	Trp	Lys	Asn	Ile	Pro	Cys	Ser	Trp	Ile	Gly	Arg	Ile	Asn	530	535	540
Ile	Val	Lys	Met	Val	Ile	Leu	Pro	Lys	Val	Ile	Tyr	Arg	Phe	Asn	Ala	545	550	555
Ile	Pro	Ile	Lys	Leu	Pro	Leu	Thr	Phe	Phe	Thr	Glu	Leu	Glu	Lys	Thr	565	570	575
Ile	Leu	Lys	Phe	Ile	Trp	Asn	Gln	Lys	Arg	Thr	Gln	Ile	Ala	Lys	Thr	580	585	590
Ile	Leu	Ser	Lys	Lys	Asn	Lys	Ala	Gly	Gly	Ile	Thr	Leu	Pro	Asp	Phe	595	600	605
Lys	Leu	Tyr	Tyr	Lys	Ala	Thr	Val	Asn	Lys	Thr	Ala	Trp	Tyr	Trp	Tyr	610	615	620
Gln	Asn	Arg	Tyr	Ile	Asp	Gln	Trp	Asn	Arg	Met	Glu	Ala	Ser	Glu	Ile	625	630	635
Thr	Pro	His	Ile	Tyr	Asn	His	Leu	Ile	Phe	Asp	Lys	Pro	Asp	Lys	Asn	645	650	655
Arg	Gln	Trp	Gly	Lys	Asp	Ser	Leu	Phe	Asn	Lys	Trp	Cys	Trp	Glu	Asn	660	665	670
Trp	Leu	Ala	Ile	Cys	Arg	Lys	Leu	Lys	Leu	Asp	Pro	Phe	Leu	Thr	Pro	675	680	685
Tyr	Thr	Lys	Ile	Asn	Thr	Arg	Trp	Ile	Lys	Asp	Leu	Asn	Val	Arg	Pro	690	695	700
Asn	Thr	Ile	Lys	Thr	Leu	Glu	Glu	Asn	Leu	Gly	Asn	Thr	Ile	Gln	Asp	705	710	715
Ile	Gly	Met	Gly	Lys	Val	Phe	Met	Thr	Lys	Thr	Pro	Lys	Ala	Met	Ala	725	730	735
Thr	Lys	Val	Lys	Ile	Asp	Lys	Trp	Asp	Leu	Ile	Lys	Leu	Lys	Ser	Phe	740	745	750
Cys	Thr	Ala	Lys	Glu	Thr	Ile	Ile	Arg	Val	Asn	Arg	Gln	Pro	Thr	Glu	755	760	765
Trp	Glu	Lys	Ile	Phe	Ala	Thr	Tyr	Pro	Ser	Asp	Lys	Gly	Leu	Ile	Ser	770	775	780

Arg Ile Tyr Lys Glu Leu Lys Gln Ile Tyr Lys Lys Lys Lys Thr Thr
 785 790 795 800
 Pro Ser Lys Ser Gly Gln Ile Gln Glu Lys Lys Asn Asn Pro Ile Lys
 805 810 815
 Lys Trp Ala Lys Asp Met Ser Arg His Phe Ser Lys Glu Asp Ile Tyr
 820 825 830
 Ala Ala Asn Arg Met Lys Lys Trp Ser Ser Ser Leu Val Phe Arg Glu
 835 840 845
 Met Gln Ile Lys Thr Thr Met Arg Tyr His Leu Met Pro Val Arg Met
 850 855 860
 Val Ile Ile Lys Lys Ser Gly Asn Asn Thr Cys Leu Arg Gly Cys Gly
 865 870 875 880
 Glu Ile Gly Met Leu Leu His Cys Trp Trp Glu Cys Lys Leu Val Gln
 885 890 895
 Pro Leu Trp Lys Thr Val Trp Arg Phe Leu Lys Asp Leu Glu Pro Glu
 900 905 910
 Ile Pro Leu Asp Pro Ala Ile Pro Leu Leu Gly Ile Tyr Pro Asn Asn
 915 920 925
 Tyr Lys Ser Cys Tyr Tyr Lys Asp Thr Arg Thr Arg Met Phe Ile Val
 930 935 940
 Ala Leu Phe Thr Ile Ala Lys Lys Asp Glu Phe Met Ser Phe Ala Gly
 945 950 955 960
 Thr Trp Met Lys Leu Glu Thr Ile Ile Leu Ser Lys Leu Ser Gln Gly
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 Gln Lys Thr Lys His His Met Phe Ser Leu Ile Gly Gly Ser
 980 985 990

<210> 155

<211> 3120

<212> DNA

<213> Homo sapiens

<400> 155

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 gggaaattta cagcactaaa tgcccataag agaaagcagg aaagatccaa aattgacacc 180
 ctaacatcac aattaaaaca actacagaag caagagcaaa cactttcaaa agctagcaga 240
 aggcaagaaa taactaagat cagagcagaa ctgaaggaga tagagacaca aaaaaccctt 300
 caaaaaatca atgaatccag gagctggttt tttgaaaaga tcaacaaaat tgatacactg 360
 ctagcaagac taataaagaa gaaaagagag aagaatcaaa tagacgcaat aaaaaatgat 420
 aaagcagata tcaccactga tcccacagaa atacaaacta ccatcagaga atactataaa 480
 cacctctatg caaataaact agaaaatcta gaagaaatgg ataaattcct tgacacatac 540
 accctcccaa gaataaacca ggaagaagtt gaatctctga atagaccaat aacaggctct 600

gaaattgagg caataattaa tagcttacca accaaaaaaa gtccaggacc agacggattc 660
acagccgaat tctaccagaa gtacaaggag gagctgatac cattccttct gaaactattc 720
caatcaatag aaaaagaggg aatcctccct aactcatttg atgaggccag catcatcctg 780
ataccaaaagc ctggcagaga cacaacaaaa aaagagaatt ttagaccaat atctctgatg 840
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atgaaatact atgcagccat aaaaaatgat gagttcatgt cctttgtagg gacatggatg 3000
aagctggaaa ccattcattct cagcaacta tcacaaggac agaaaaccaa acaccacatg 3060
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<210> 156

<211> 1018

<212> PRT

<213> Homo sapiens

<400> 156

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Thr Thr Tyr Gln Asn Leu Trp Asp Thr Phe Lys Ala Val Cys Arg Gly
20 25 30

Lys Phe Thr Ala Leu Asn Ala His Lys Arg Lys Gln Glu Arg Ser Lys

35					40					45					
Ile	Asp	Thr	Leu	Thr	Ser	Gln	Leu	Lys	Gln	Leu	Gln	Lys	Gln	Glu	Gln
	50					55					60				
Thr	Leu	Ser	Lys	Ala	Ser	Arg	Arg	Gln	Glu	Ile	Thr	Lys	Ile	Arg	Ala
	65					70					75				80
Glu	Leu	Lys	Glu	Ile	Glu	Thr	Gln	Lys	Thr	Leu	Gln	Lys	Ile	Asn	Glu
				85					90					95	
Ser	Arg	Ser	Trp	Phe	Phe	Glu	Lys	Ile	Asn	Lys	Ile	Asp	Thr	Leu	Leu
			100					105					110		
Ala	Arg	Leu	Ile	Lys	Lys	Lys	Arg	Glu	Lys	Asn	Gln	Ile	Asp	Ala	Ile
		115					120					125			
Lys	Asn	Asp	Lys	Ala	Asp	Ile	Thr	Thr	Asp	Pro	Thr	Glu	Ile	Gln	Thr
	130					135					140				
Thr	Ile	Arg	Glu	Tyr	Tyr	Lys	His	Leu	Tyr	Ala	Asn	Lys	Leu	Glu	Asn
	145					150					155				160
Leu	Glu	Glu	Met	Asp	Lys	Phe	Leu	Asp	Thr	Tyr	Thr	Leu	Pro	Arg	Ile
				165					170					175	
Asn	Gln	Glu	Glu	Val	Glu	Ser	Leu	Asn	Arg	Pro	Ile	Thr	Gly	Ser	Glu
				180				185					190		
Ile	Glu	Ala	Ile	Ile	Asn	Ser	Leu	Pro	Thr	Lys	Lys	Ser	Pro	Gly	Pro
	195						200					205			
Asp	Gly	Phe	Thr	Ala	Glu	Phe	Tyr	Gln	Lys	Tyr	Lys	Glu	Glu	Leu	Ile
	210					215					220				
Pro	Phe	Leu	Leu	Lys	Leu	Phe	Gln	Ser	Ile	Glu	Lys	Glu	Gly	Ile	Leu
	225					230					235				240
Pro	Asn	Ser	Phe	Asp	Glu	Ala	Ser	Ile	Ile	Leu	Ile	Pro	Lys	Pro	Gly
				245					250					255	
Arg	Asp	Thr	Thr	Lys	Lys	Glu	Asn	Phe	Arg	Pro	Ile	Ser	Leu	Met	Asn
			260					265					270		
Ile	Asp	Ala	Lys	Ile	Leu	Asn	Lys	Ile	Leu	Ala	Asn	Arg	Ile	Lys	Gln
	275						280					285			
His	Ile	Lys	Lys	Leu	Ile	His	His	Asp	Gln	Val	Gly	Phe	Ile	Pro	Gly
	290					295					300				
Met	Gln	Gly	Trp	Phe	Asn	Ile	Cys	Lys	Ser	Ile	Asn	Val	Ile	Gln	His
	305					310					315				320
Ile	Asn	Arg	Thr	Lys	Asp	Lys	Asn	His	Met	Ile	Ile	Ser	Ile	Asp	Ala
				325					330					335	
Glu	Lys	Ala	Phe	Asp	Lys	Ile	Gln	Gln	His	Phe	Met	Leu	Lys	Thr	Leu

340										345					350				
Asn	Lys	Leu	Gly	Ile	Asp	Gly	Thr	Tyr	Leu	Lys	Ile	Ile	Arg	Ala	Ile				
		355						360				365							
Cys	Asp	Lys	Pro	Thr	Ala	Asn	Ile	Ile	Leu	Asn	Gly	Gln	Lys	Leu	Glu				
		370				375					380								
Ala	Phe	Pro	Leu	Lys	Thr	Gly	Thr	Arg	Gln	Gly	Cys	Pro	Leu	Ser	Pro				
		385				390					395				400				
Leu	Leu	Phe	Asn	Ile	Val	Leu	Glu	Val	Leu	Ala	Arg	Ala	Ile	Arg	Gln				
				405					410					415					
Glu	Lys	Glu	Ile	Lys	Gly	Ile	Gln	Leu	Gly	Lys	Glu	Glu	Val	Lys	Leu				
			420					425					430						
Ser	Leu	Phe	Ala	Asp	Asp	Met	Ile	Val	Tyr	Leu	Glu	Asn	Pro	Ile	Ile				
			435				440					445							
Ser	Ala	Gln	Asn	Leu	Leu	Lys	Leu	Ile	Ser	Asn	Phe	Ser	Lys	Val	Ser				
		450				455					460								
Gly	Tyr	Lys	Ile	Asp	Val	Gln	Lys	Ser	Gln	Ala	Phe	Leu	Tyr	Thr	Asn				
					470						475				480				
Thr	Asp	Gln	Thr	Glu	Ser	Gln	Ile	Met	Ser	Asp	Leu	Pro	Phe	Thr	Ile				
				485					490					495					
Ala	Ser	Lys	Arg	Ile	Lys	Tyr	Leu	Gly	Ile	Gln	Leu	Thr	Arg	Asp	Val				
			500					505					510						
Lys	Asp	Leu	Phe	Lys	Glu	Asn	Tyr	Lys	Pro	Leu	Leu	Asn	Glu	Ile	Lys				
		515					520					525							
Lys	Asp	Thr	Asn	Lys	Trp	Lys	Asn	Ile	Pro	Gly	Ser	Trp	Ile	Gly	Arg				
		530				535					540								
Ile	Asn	Ile	Val	Lys	Met	Ala	Ile	Glu	Pro	Lys	Val	Ile	Tyr	Arg	Phe				
					550				555						560				
Asn	Ala	Ile	Pro	Ile	Lys	Leu	Pro	Met	Thr	Phe	Phe	Thr	Glu	Leu	Glu				
				565					570					575					
Lys	Thr	Thr	Leu	Lys	Phe	Ile	Trp	Asn	Gln	Lys	Arg	Ala	His	Ile	Ala				
			580					585					590						
Lys	Ser	Ile	Leu	Asn	Gln	Lys	Asn	Lys	Ala	Gly	Gly	Ile	Thr	Pro	Pro				
		595					600					605							
Asp	Phe	Lys	Leu	Tyr	Tyr	Lys	Ala	Thr	Val	Asn	Lys	Thr	Ala	Trp	Tyr				
		610				615					620								
Trp	Tyr	Gln	Asn	Arg	Asp	Ile	Asp	Gln	Trp	Asn	Arg	Thr	Asp	Pro	Ser				
					630						635				640				
Glu	Ile	Met	Pro	His	Ile	Tyr	Asn	Tyr	Leu	Ile	Phe	Asp	Lys	Pro	Asp				

645					650					655					
Lys	Lys	Lys	Gln	Trp	Gly	Lys	Asp	Ser	Leu	Phe	Asn	Lys	Trp	Cys	Trp
			660					665					670		
Glu	Asn	Trp	Leu	Ala	Ile	Gly	Arg	Lys	Leu	Lys	Leu	Asp	Pro	Phe	Leu
		675					680					685			
Thr	Pro	Tyr	Thr	Lys	Ile	Asn	Ser	Arg	Trp	Ile	Lys	Asp	Leu	Asn	Val
	690					695					700				
Arg	Pro	Lys	Thr	Ile	Lys	Thr	Leu	Glu	Gly	Asn	Leu	Gly	Ile	Thr	Ile
705					710					715					720
Glu	Asp	Thr	Gly	Met	Gly	Lys	Asp	Phe	Met	Ser	Lys	Thr	Pro	Lys	Ala
				725					730					735	
Met	Ala	Thr	Lys	Asp	Lys	Ile	Asp	Lys	Trp	Asp	Leu	Ile	Lys	Leu	Lys
			740					745					750		
Ser	Phe	Cys	Thr	Ala	Lys	Glu	Thr	Thr	Ile	Arg	Val	Asn	Arg	Gln	Pro
		755					760					765			
Thr	Lys	Trp	Glu	Lys	Leu	Phe	Ala	Thr	Tyr	Ser	Ser	Asp	Lys	Gly	Leu
	770					775					780				
Ile	Ser	Arg	Ile	Tyr	Lys	Glu	Leu	Lys	Gln	Ile	Tyr	Lys	Lys	Arg	Thr
785					790					795					800
Asn	Asn	Pro	Ile	Lys	Lys	Lys	Thr	Asn	Asn	Pro	Ile	Lys	Lys	Arg	Ala
			805					810						815	
Lys	Asp	Met	Asn	Arg	His	Phe	Ser	Lys	Glu	Asp	Ile	Tyr	Ala	Ala	Lys
			820					825					830		
Arg	His	Met	Lys	Lys	Cys	Ser	Ser	Ser	Leu	Ala	Ile	Arg	Glu	Met	Gln
		835					840					845			
Met	Lys	Thr	Thr	Met	Arg	Tyr	His	Leu	Thr	Pro	Val	Arg	Met	Ala	Ile
	850					855					860				
Ile	Lys	Lys	Ser	Gly	Asn	Asn	Arg	Cys	Trp	Arg	Gly	Cys	Gly	Glu	Ile
865					870					875					880
Gly	Thr	Leu	Leu	Arg	Cys	Trp	Trp	Asp	Cys	Lys	Leu	Val	Gln	Pro	Leu
				885					890					895	
Trp	Lys	Thr	Val	Trp	Arg	Phe	Leu	Arg	Asp	Leu	Glu	Leu	Glu	Ile	Pro
			900					905					910		
Phe	Asp	Pro	Ala	Ile	Pro	Leu	Leu	Gly	Ile	Tyr	Pro	Lys	Asp	Tyr	Lys
		915					920					925			
Ser	Cys	Cys	Tyr	Lys	Asp	Thr	Cys	Arg	Arg	Met	Phe	Ile	Ala	Ala	Leu
	930					935					940				
Phe	Thr	Ile	Ala	Lys	Thr	Trp	Asn	Gln	Pro	Lys	Cys	Pro	Thr	Met	Ile

Asp Gly Leu Asp Gly Ala Tyr Val Ala Val Ala Asn His Ser Ser His
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 Leu Asp Ala Pro Leu Val Phe Gly Ala Leu Pro Lys Arg Leu Ser Lys
 65 70 75 80
 Tyr Leu Ala Thr Gly Ala Ala Ala Asp Tyr Phe Phe Thr Ala Trp Trp
 85 90 95
 Lys Ala Ile Ala Pro Val Leu Phe Phe Asn Ala Phe Pro Val Asp Arg
 100 105 110
 Gly Lys Gly Lys Ser Lys Gln Gly Ala Arg Ser Pro Arg Ser His Arg
 115 120 125
 Gly Met Ala Gly Ser Leu Leu Thr Asp Gly Val Pro Leu Leu Ile Phe
 130 135 140
 Pro Glu Gly Thr Arg Ser Arg Thr Gly Ala Met Gly Thr Phe Lys Pro
 145 150 155 160
 Gly Ala Ala Ala Leu Ala Ile Ser Arg Gly Val Pro Val Ile Pro Ile
 165 170 175
 Ala Leu Val Gly Ala Trp Ala Ala Met Pro Ser Glu Gln Ala Arg Leu
 180 185 190
 Pro Lys Gly Arg Pro Leu Val His Val Ala Ile Gly His Pro Met Asp
 195 200 205
 Pro Val Pro Gly Glu Ile Ala His Gln Phe Ser Glu Arg Ile Arg Arg
 210 215 220
 Gln Val Ile Glu Leu His Asp Gln Thr Ala Arg Ala Tyr Gly Met Pro
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 Thr Leu Asp Glu Tyr Gly Arg His Arg Ala Leu Ser Gln Ala Ser Glu
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 Ser Gly Asp Thr Ala Ser Thr Asn His Ser Thr
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<210> 159

<211> 906

<212> DNA

<213> Homo sapiens

<400> 159

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<210> 160
 <211> 267
 <212> PRT
 <213> Homo sapiens

<400> 160
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 35 40 45
 Asp Gly Leu Asp Gly Ala Tyr Val Ala Val Ala Asn His Ser Ser His
 50 55 60
 Leu Asp Ala Pro Leu Val Phe Gly Ala Leu Pro Lys Arg Leu Ser Lys
 65 70 75 80
 Tyr Leu Ala Thr Gly Ala Ala Ala Asp Tyr Phe Phe Thr Ala Trp Trp
 85 90 95
 Lys Ala Ile Ala Pro Val Leu Phe Phe Asn Ala Phe Pro Val Asp Arg
 100 105 110
 Gly Lys Gly Lys Ser Lys Gln Gly Ala Arg Ser Pro Arg Ser His Arg
 115 120 125
 Gly Met Ala Gly Ser Leu Leu Thr Asp Gly Val Pro Leu Leu Ile Phe
 130 135 140
 Pro Glu Gly Thr Arg Ser Arg Thr Gly Ala Met Gly Thr Phe Lys Pro
 145 150 155 160
 Gly Ala Ala Ala Leu Ala Ile Ser Arg Gly Val Pro Val Ile Pro Ile
 165 170 175
 Ala Leu Val Gly Ala Trp Ala Ala Met Pro Ser Glu Gln Ala Gly Leu
 180 185 190
 Pro Lys Gly Arg Pro Ser Val His Val Ala Ile Gly His Pro Met Asp
 195 200 205
 Pro Val Pro Gly Glu Ile Ala His Gln Phe Ser Glu Arg Ile Arg Arg
 210 215 220

Gln Val Ile Glu Leu His Asp Gln Thr Ala Arg Ala Tyr Gly Met Pro
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Thr Leu Asp Glu Tyr Gly Arg His Arg Ala Leu Ser Gln Ala Ser Glu
 245 250 255

Ser Gly Asp Thr Ala Ser Thr Asn His Ser Thr
 260 265

<210> 161
 <211> 1388
 <212> DNA
 <213> Homo sapiens

<400> 161
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 <212> PRT
 <213> Homo sapiens

<400> 162
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 35 40 45

Cys Glu Asn Lys Gln Gln Met Arg Thr Asn Val Ile Arg Glu Ile Met
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 Asp Thr Glu Arg Val Tyr Ile Lys His Leu Arg Asp Ile Cys Glu Gly
 65 70 75 80
 Tyr Ile Arg Gln Cys Arg Lys His Thr Gly Met Phe Thr Val Ala Gln
 85 90 95
 Leu Ala Thr Ile Phe Gly Asn Ile Glu Asp Ile Tyr Lys Phe Gln Arg
 100 105 110
 Lys Phe Leu Lys Asp Leu Glu Lys Gln Tyr Asn Lys Glu Glu Pro His
 115 120 125
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 130 135 140
 Ile Tyr Ser Glu Tyr Cys Asn Asn His Pro Gly Ala Cys Leu Glu Leu
 145 150 155 160
 Ala Asn Leu Met Lys Gln Gly Lys Tyr Arg His Phe Phe Glu Ala Cys
 165 170 175
 Arg Leu Leu Gln Gln Met Ile Asp Ile Ala Ile Asp Gly Phe Leu Leu
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 Thr Pro Val Gln Lys Ile Cys Lys Tyr Pro Leu Gln Leu Ala Glu Leu
 195 200 205
 Leu Lys Tyr Thr Thr Gln Glu His Ser Asp Tyr Ser Asn Ile Lys Ala
 210 215 220
 Ala Tyr Glu Ala Met Lys Asn Val Ala Cys Leu Ile Asn Glu Arg Lys
 225 230 235 240
 Arg Lys Leu Glu Ser Ile Asp Lys Ile Ala Arg Trp Gln Val Ser Ile
 245 250 255
 Val Gly Trp Glu Gly Leu Asp Ile Leu Asp Arg Ser Ser Glu Leu Ile
 260 265 270
 His Ser Gly Glu Leu Thr Lys Ile Thr Lys Gln Gly Lys Ser Gln Gln
 275 280 285
 Arg Thr Phe Phe Leu Phe Asp His Gln Leu Val Ser Cys Lys Lys Asp
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 Leu Leu Arg Arg Asp Met Leu Tyr Tyr Lys Gly Arg Leu Asp Met Asp
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 340 345 350

<400> 164

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Glu Arg Phe Val Cys Arg Leu Ser Ala Glu Leu Ser Pro Gly Gly Pro
50 55 60
Asn Gln Ala Ser Gly Ala Pro Ser Val Val Phe Leu Thr Val Cys Met
65 70 75 80
Thr Asn Glu Gly His Pro Trp Val Ser Leu Val Val Gln Lys Thr Arg
85 90 95
Leu Gln Ile Ser Gln Asp Pro Ser Leu Asn Tyr Glu Tyr Leu Pro Thr
100 105 110
Met Gly Leu Lys Ser Phe Ile Gln Ala Ser Leu Ala Leu Leu Phe Gly
115 120 125
Lys His Ser Gln Ala Ile Val Glu Asn Arg Val Gly Gly Val His Thr
130 135 140
Val Gly Asp Ser Gly Ala Phe Gln Leu Gly Val Gln Phe Leu Arg Ala
145 150 155 160
Trp His Lys Asp Ala Arg Ile Val Tyr Ile Ile Ser Ser Gln Lys Val
165 170 175
Pro Thr Glu Leu His Gly Leu Val Phe Gln Asp Met Gly Phe Thr Val
180 185 190
Tyr Glu Tyr Ser Val Trp Asp Pro Lys Lys Leu Cys Met Asp Pro Asp
195 200 205
Ile Leu Leu Asn Val Val Glu Gln Ile Pro His Gly Cys Val Leu Val
210 215 220
Met Gly Asn Ile Ile Asp Cys Lys Leu Thr Pro Ser Gly Trp Ala Lys
225 230 235 240
Leu Met Ser Met Ile Lys Ser Lys Gln Ile Phe Pro Phe Phe Asp Ile
245 250 255
Pro Cys Gln Gly Leu Tyr Thr Ser Asp Leu Glu Glu Asp Thr Arg Ile
260 265 270
Leu Gln Tyr Phe Val Ser Gln Gly Phe Glu Phe Phe Cys Ser Gln Ser
275 280 285
Leu Ser Lys Asn Phe Gly Ile Tyr Asp Glu Gly Val Gly Met Leu Val

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Glu Gly Leu Ala Gln Ala Leu Trp Leu Asn Pro Pro Asn Thr Gly Ala				
		325	330	335
Arg Val Ile Thr Ser Ile Leu Cys Asn Pro Ala Leu Leu Gly Glu Trp				
		340	345	350
Lys Gln Ser Leu Lys Glu Val Val Glu Asn Ile Met Leu Thr Lys Glu				
		355	360	365
Lys Val Lys Glu Lys Leu Gln Leu Leu Gly Thr Pro Gly Ser Trp Gly				
		370	375	380
His Ile Thr Glu Gln Ser Gly Thr His Gly Tyr Leu Gly Leu Asn Cys				
385		390	395	400
Lys Gln Val Glu Tyr Leu Val Arg Lys Lys His Ile Tyr Ile Pro Lys				
		405	410	415
Asn Gly Gln Ile Asn Phe Ser Cys Ile Asn Ala Asn Asn Ile Asn Tyr				
		420	425	430
Ile Thr Glu Gly Ile Asn Glu Ala Val Leu Leu Thr Glu Ser Ser Glu				
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Met Cys Leu Pro Lys Glu Lys Lys Thr Leu Ile Gly Ile Lys Leu				
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<210> 165

<211> 1280

<212> DNA

<213> Homo sapiens

<400> 165

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<210> 166
 <211> 421
 <212> PRT
 <213> Homo sapiens

<400> 166
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 20 25 30
 Ile Phe Leu Ala Tyr Arg Val Cys Met Thr Asn Glu Gly His Pro Trp
 35 40 45
 Val Ser Leu Val Val Gln Lys Thr Arg Leu Gln Ile Ser Gln Asp Pro
 50 55 60
 Ser Leu Asn Tyr Glu Tyr Leu Pro Thr Met Gly Leu Lys Ser Phe Ile
 65 70 75 80
 Gln Ala Ser Leu Ala Leu Leu Phe Gly Lys His Ser Gln Ala Ile Val
 85 90 95
 Glu Asn Arg Ala Gly Gly Val His Thr Val Gly Asp Ser Gly Ala Phe
 100 105 110
 Gln Leu Gly Val Gln Phe Leu Arg Ala Trp His Lys Asp Ala Arg Ile
 115 120 125
 Val Tyr Ile Ile Ser Ser Gln Lys Glu Leu His Gly Leu Val Phe Gln
 130 135 140
 Asp Met Gly Phe Thr Val Tyr Glu Tyr Ser Val Trp Asp Pro Lys Lys
 145 150 155 160
 Leu Cys Met Asp Pro Asp Ile Leu Leu Asn Val Val Glu Gln Ile Pro
 165 170 175
 His Gly Cys Val Leu Val Met Gly Asn Ile Ile Asp Cys Lys Leu Thr
 180 185 190
 Pro Ser Gly Trp Ala Lys Leu Met Ser Met Ile Lys Ser Lys Gln Ile
 195 200 205
 Phe Pro Phe Phe Asp Ile Pro Cys Gln Gly Leu Tyr Thr Ser Asp Leu
 210 215 220
 Glu Glu Asp Thr Arg Ile Leu Gln Tyr Phe Val Ser Gln Gly Phe Glu
 225 230 235 240

Phe Phe Cys Ser Gln Ser Leu Ser Lys Asn Phe Gly Ile Tyr Asp Glu
 245 250 255
 Gly Val Gly Met Leu Val Val Val Ala Val Asn Asn Gln Gln Leu Leu
 260 265 270
 Cys Val Leu Ser Gln Leu Glu Gly Leu Ala Gln Ala Leu Trp Leu Asn
 275 280 285
 Pro Pro Asn Thr Gly Ala Arg Val Ile Thr Ser Ile Leu Cys Asn Pro
 290 295 300
 Ala Leu Leu Gly Glu Trp Lys Gln Ser Leu Lys Glu Val Val Glu Asn
 305 310 315 320
 Ile Met Leu Thr Lys Glu Lys Val Lys Glu Lys Leu Gln Leu Leu Gly
 325 330 335
 Thr Pro Gly Ser Trp Gly His Ile Thr Glu Gln Ser Gly Thr His Gly
 340 345 350
 Tyr Leu Gly Leu Asn Ser Gln Gln Val Glu Tyr Leu Val Arg Lys Lys
 355 360 365
 His Ile Tyr Ile Pro Lys Asn Gly Gln Ile Asn Phe Ser Cys Ile Asn
 370 375 380
 Ala Asn Asn Ile Asn Tyr Ile Thr Glu Gly Ile Asn Glu Ala Val Leu
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<210> 167
 <211> 4915
 <212> DNA
 <213> Homo sapiens

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<210> 168

<211> 1561

<212> PRT

<213> Homo sapiens

<400> 168

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          20             25             30

Met Leu Ala Ser His Ile Pro Ala Gln Pro Gln Gly Thr Ser Leu Lys
      35             40             45

Pro Pro Val Pro Ser Ala Pro Ser Ser Ile Leu Ala Ser Gly Ser Ser
      50             55             60

Ser Pro His Ala Leu Arg Asn Glu Pro Arg Thr Pro Thr Leu Thr Arg
      65             70             75             80

Pro Arg Cys Ile Asn Ala Leu Thr Cys Thr Ala Ser Pro Cys Gly Pro
          85             90             95

Thr Phe Arg Leu Gln His Ser Leu Asp Ala Ser Pro Arg Pro Ala Cys
      100             105             110

Leu Val Thr Val Ala Pro Asp Pro Ala Ser Phe Ala Ala Pro Arg Ser
      115             120             125

Phe Pro Leu Arg Leu Pro Arg Gly Asp Glu Ser Ala Gln Arg Gly Gly
      130             135             140

Arg Arg Pro Pro Thr Leu Cys Ala Leu Ser Pro Ala Pro Ala Ala Gln
      145             150             155             160

Pro Ser Pro Val Arg Pro Ala Glu Thr Met Asp Thr Glu Asp Asp Pro
          165             170             175

Leu Leu Gln Asp Val Trp Leu Glu Glu Glu Gln Glu Glu Glu Ala
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Thr Gly Glu Thr Phe Leu Gly Ala Gln Lys Pro Gly Pro Gln Pro Gly
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 Pro Ala Ser Gly Phe Trp Ser Thr Leu Gly Trp Ala Phe Thr Asn Pro
 225 230 235 240
 Cys Cys Ala Gly Leu Val Leu Phe Leu Gly Cys Ser Ile Pro Met Ala
 245 250 255
 Leu Ser Ala Phe Met Phe Leu Tyr Tyr Pro Pro Leu Asp Ile Asp Ile
 260 265 270
 Ser Tyr Asn Ala Phe Glu Ile Arg Asn His Glu Ala Ser Gln Arg Phe
 275 280 285
 Asp Ala Leu Thr Leu Ala Leu Lys Ser Gln Phe Gly Ser Trp Gly Arg
 290 295 300
 Asn Arg Arg Asp Leu Ala Asp Phe Thr Ser Glu Thr Leu Gln Arg Leu
 305 310 315 320
 Ile Ser Glu Gln Leu Gln Gln Leu His Leu Gly Asn Arg Ser Arg Gln
 325 330 335
 Ala Ser Arg Ala Pro Arg Val Ile Pro Ala Ala Ser Leu Gly Ser Pro
 340 345 350
 Gly Pro Tyr Arg Asp Thr Ser Ala Ala Gln Lys Pro Thr Ala Asn Arg
 355 360 365
 Ser Gly Arg Leu Arg Arg Glu Thr Pro Pro Leu Glu Asp Leu Ala Ala
 370 375 380
 Asn Gln Ser Glu Asp Pro Arg Asn Gln Arg Leu Ser Lys Asn Gly Arg
 385 390 395 400
 Tyr Gln Pro Ser Ile Pro Pro His Ala Ala Val Ala Ala Asn Gln Ser
 405 410 415
 Arg Ala Arg Arg Gly Ala Ser Arg Trp Asp Tyr Ser Arg Ala Tyr Val
 420 425 430
 Ser Ala Asn Thr Gln Thr His Ala His Trp Arg Ile Glu Leu Ile Phe
 435 440 445
 Leu Ala Arg Gly Asp Ala Glu Arg Asn Ile Phe Thr Ser Glu Arg Leu
 450 455 460
 Val Thr Ile His Glu Ile Glu Arg Lys Ile Met Asp His Pro Gly Phe
 465 470 475 480
 Arg Glu Phe Cys Trp Lys Pro His Glu Val Leu Lys Asp Leu Pro Leu
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 Gly Ser Tyr Ser Tyr Cys Ser Pro Pro Ser Ser Leu Met Thr Tyr Phe
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<212> DNA

<213> Homo sapiens

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Lys Val Val Asp Glu Phe Gly Asn Arg Phe Asp Val Asn Asn Cys Ser
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Ile Cys Tyr His Trp Val Thr Ser Arg Pro Gln Glu Pro Ala Val Phe
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Ser Ala Asp Tyr Arg Gly Cys His Val Leu Glu Lys Asp Gly Arg Phe
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His Leu Arg Val Phe Met Glu Ala Val Leu Pro Asn Gly Arg Val Asp
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Val Ala Gln Asp Ala Thr Leu Ile Cys Pro Lys Pro Asp Pro Ser Arg
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Thr Leu Asp Ser Gln Leu Ala Pro Pro Ala Met Phe Ser Val Ser Thr
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Pro Gln Thr Leu Ser Phe Leu Pro Thr Ser Gly His Thr Ser Gln Gly
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Ser Gly His Ala Phe Pro Ser Pro Leu Asp Pro Gly His Ser Ser Val
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Thr Leu Ala Gln Pro His Trp Gly Thr Leu Glu His Trp Asp Val Asn

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<211> 6108

<212> DNA

<213> Homo sapiens

<400> 171

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tccctccatg gcaggggtgg attcgggagc tgggagtaac caggcaaagt caaccagatg 4980
cctagctcct gctgagaccc aggtcctatg gcagctcctc attagattaa aggagaccac 5040
ttccaaagca ggtgctgcat ggctcaccat catatgcccc aaacaactga aagttggcgg 5100
ttatcaccag actgtgagtt tctggcaagt agcttgggga agctgaataa actctaggcc 5160
cagggctact aaagacttca ggatagaatt ctccatcaaa tatacagcat aagtaaaact 5220
gctctgcact gtttaatcca tttccaaggg gcttagaaaa gctaacaagg gtgtgtcccc 5280
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tcagatacct tcccatcctg agctctctca cctacctgct ctctctccta gagcaggata 5400
ctgggggtact tttaagaagg gtgctccttt taagatgccc agaaaagctg tatttaactc 5460
ttgctatattg taacttgggg atggtctccc ctgccccagg gcacataaga gcaaaggctc 5520
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gaaaaaaaaa taaaactctg tatactgtat cagcagcttt gtgtaaaaat ggcaatcaag 5820
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cctgtgacag aattcgctgt taagagtttt taattaaaaa tattaaattc cttttaataa 6060
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<210> 172
 <211> 567
 <212> PRT
 <213> Homo sapiens

<400> 172
 Met Ala Ser His Val Asp Leu Leu Thr Glu Leu Gln Leu Leu Glu Lys
 1 5 10 15
 Val Pro Thr Leu Glu Arg Leu Arg Ala Ala Gln Lys Arg Arg Ala Gln
 20 25 30
 Gln Leu Lys Lys Trp Ala Gln Tyr Glu Gln Asp Leu Gln His Arg Lys
 35 40 45
 Arg Lys His Glu Arg Lys Arg Ser Thr Gly Gly Arg Arg Lys Lys Val
 50 55 60
 Ser Phe Glu Ala Ser Val Ala Leu Leu Glu Ala Ser Leu Arg Asn Asp
 65 70 75 80
 Ala Glu Glu Val Arg Tyr Phe Leu Lys Asn Lys Val Ser Pro Asp Leu
 85 90 95
 Cys Asn Glu Asp Gly Leu Thr Ala Leu His Gln Cys Cys Ile Asp Asn
 100 105 110
 Phe Glu Glu Ile Val Lys Leu Leu Leu Ser His Gly Ala Asn Val Asn
 115 120 125
 Ala Lys Asp Asn Glu Leu Trp Thr Pro Leu His Ala Ala Ala Thr Cys
 130 135 140
 Gly His Ile Asn Leu Val Lys Ile Leu Val Gln Tyr Gly Ala Asp Leu

145		150		155		160									
Leu	Ala	Val	Asn	Ser	Asp	Gly	Asn	Met	Pro	Tyr	Asp	Leu	Cys	Glu	Asp
			165						170					175	
Glu	Pro	Thr	Leu	Asp	Val	Ile	Glu	Thr	Cys	Met	Ala	Tyr	Gln	Gly	Ile
			180					185					190		
Thr	Gln	Glu	Lys	Ile	Asn	Glu	Met	Arg	Val	Ala	Pro	Glu	Gln	Gln	Met
			195				200					205			
Ile	Ala	Asp	Ile	His	Cys	Met	Ile	Ala	Ala	Gly	Gln	Asp	Leu	Asp	Trp
	210					215					220				
Ile	Asp	Ala	Gln	Gly	Ala	Thr	Leu	Leu	His	Ile	Ala	Gly	Ala	Asn	Gly
225					230					235					240
Tyr	Leu	Arg	Ala	Ala	Glu	Leu	Leu	Leu	Asp	His	Gly	Val	Arg	Val	Asp
			245						250					255	
Val	Lys	Asp	Trp	Asp	Gly	Trp	Glu	Pro	Leu	His	Ala	Ala	Ala	Phe	Trp
			260					265					270		
Gly	Gln	Met	Gln	Met	Ala	Glu	Leu	Leu	Val	Ser	His	Gly	Ala	Ser	Leu
		275					280					285			
Ser	Ala	Arg	Thr	Ser	Met	Asp	Glu	Met	Pro	Ile	Asp	Leu	Cys	Glu	Glu
	290					295					300				
Glu	Glu	Phe	Lys	Val	Leu	Leu	Leu	Glu	Leu	Lys	His	Lys	His	Asp	Val
305					310					315					320
Ile	Met	Lys	Ser	Gln	Leu	Arg	His	Lys	Ser	Ser	Leu	Ser	Arg	Arg	Thr
				325					330					335	
Ser	Ser	Ala	Gly	Ser	Arg	Gly	Lys	Val	Val	Arg	Arg	Ala	Ser	Leu	Ser
			340					345					350		
Asp	Arg	Thr	Asn	Leu	Tyr	Arg	Lys	Glu	Tyr	Glu	Gly	Glu	Ala	Ile	Leu
		355					360					365			
Trp	Gln	Arg	Ser	Ala	Ala	Glu	Asp	Gln	Arg	Thr	Ser	Thr	Tyr	Asn	Gly
	370					375					380				
Asp	Ile	Arg	Glu	Thr	Arg	Thr	Asp	Gln	Glu	Asn	Lys	Asp	Pro	Asn	Pro
385					390					395					400
Arg	Leu	Glu	Lys	Pro	Val	Leu	Leu	Ser	Glu	Phe	Pro	Thr	Lys	Ile	Pro
			405						410					415	
Arg	Gly	Glu	Leu	Asp	Met	Pro	Val	Glu	Asn	Gly	Leu	Arg	Ala	Pro	Val
			420					425					430		
Ser	Ala	Tyr	Gln	Tyr	Ala	Leu	Ala	Asn	Gly	Asp	Val	Trp	Lys	Val	His
	435						440					445			
Glu	Val	Pro	Asp	Tyr	Ser	Met	Ala	Tyr	Gly	Asn	Pro	Gly	Val	Ala	Asp

450		455		460
Ala Thr Pro Pro Trp Ser Ser Tyr Lys Glu Gln Ser Pro Gln Thr Leu				
465		470	475	480
Leu Glu Leu Lys Arg Gln Arg Ala Ala Ala Lys Leu Leu Ser His Pro				
	485		490	495
Phe Leu Ser Thr His Leu Gly Ser Ser Met Ala Arg Thr Gly Glu Ser				
	500	505		510
Ser Ser Glu Gly Lys Ala Pro Leu Ile Gly Gly Arg Thr Ser Pro Tyr				
	515	520	525	
Ser Ser Asn Gly Thr Ser Val Tyr Tyr Thr Val Thr Ser Gly Asp Pro				
	530	535	540	
Pro Leu Leu Lys Phe Lys Ala Pro Ile Glu Glu Met Glu Glu Lys Val				
545	550	555		560
His Gly Cys Cys Arg Ile Ser				
	565			

<210> 173
 <211> 1011
 <212> DNA
 <213> Homo sapiens

<400> 173
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 ctcccttggat tcacagggca gcctcagctt cagatgatga tctctggggg tgtctttttc 120
 ttctacacta ttgccttcat gggaaatatg gccatcatcc tattgtcttt cctagatgac 180
 catctccaag tccccatgta cttcttcctt agaaatttgg ccatcttgga tctctgttat 240
 accacaaata tagtcccaca aatgttggtc agtatctggg gcaaagacaa aagaattacc 300
 tttgggtgggt gtgcctttca acttttcatt gatgtggcac tgtactcagt tgaatgcac 360
 cttctgtcca tgatgtcata tgatcgactc aatgctatct gcaagcctct gcatcatatg 420
 accataatga acctccaact ctgccagggc cttgtgggtca tctcctgggt agttgggtgtg 480
 attaattgca tcataccttc cccttatgcc acgagtcttc ctcgatgtag gaaccaccac 540
 ctagaccact tttttgtgtg tgtgaaatgt ctgcaaagat caagattcaa gattgcatgt 600
 gtggacacca cagccatgga ggtaaccaca tttgccatgt gcctgattat agttcttgtt 660
 cctcttcttc ttattcttgt gtcatatggg ttcatgtctg tggctgtact caagatcaag 720
 tctgcagcag gaagacaaaa agcatttggg acctgttctt cccatctcgt tgtgggtatcc 780
 atcttctgtg ggacagttac atacatgtat atacagccag gaaacagtcc aaatcagaat 840
 gagggcaaac ttctcagtat attttactcc attgttactc ccagcttgaa cccattaatt 900
 tatacggtaa ggaataagga gttcaagggg gccatgaaga ggctaactgg aaaagaaaaa 960
 gattgcatgg aaaaaagagg acattgattc ttctctccag caatttctaa t 1011

<210> 174
 <211> 319
 <212> PRT
 <213> Homo sapiens

<400> 174
 Met Ile Asn Asp Ser His Phe Ser Gly Phe Ile Leu Leu Gly Phe Thr
 1 5 10 15

Gly Gln Pro Gln Leu Gln Met Met Ile Ser Gly Val Val Phe Phe Phe
 20 25 30
 Tyr Thr Ile Ala Phe Met Gly Asn Met Ala Ile Ile Leu Leu Ser Phe
 35 40 45
 Leu Asp Asp His Leu Gln Val Pro Met Tyr Phe Phe Leu Arg Asn Leu
 50 55 60
 Ala Ile Leu Asp Leu Cys Tyr Thr Thr Asn Ile Val Pro Gln Met Leu
 65 70 75 80
 Val Ser Ile Trp Gly Lys Asp Lys Arg Ile Thr Phe Gly Gly Cys Ala
 85 90 95
 Phe Gln Leu Phe Ile Asp Val Ala Leu Tyr Ser Val Glu Cys Ile Leu
 100 105 110
 Leu Ser Met Met Ser Tyr Asp Arg Leu Asn Ala Ile Cys Lys Pro Leu
 115 120 125
 His His Met Thr Ile Met Asn Leu Gln Leu Cys Gln Gly Leu Val Val
 130 135 140
 Ile Ser Trp Val Val Gly Val Ile Asn Cys Ile Ile Pro Ser Pro Tyr
 145 150 155 160
 Ala Thr Ser Leu Pro Arg Cys Arg Asn His His Leu Asp His Phe Phe
 165 170 175
 Val Cys Val Lys Cys Leu Gln Arg Ser Arg Phe Lys Ile Ala Cys Val
 180 185 190
 Asp Thr Thr Ala Met Glu Val Thr Thr Phe Ala Met Cys Leu Ile Ile
 195 200 205
 Val Leu Val Pro Leu Leu Leu Ile Leu Val Ser Tyr Gly Phe Ile Ala
 210 215 220
 Val Ala Val Leu Lys Ile Lys Ser Ala Ala Gly Arg Gln Lys Ala Phe
 225 230 235 240
 Gly Thr Cys Ser Ser His Leu Val Val Val Ser Ile Phe Cys Gly Thr
 245 250 255
 Val Thr Tyr Met Tyr Ile Gln Pro Gly Asn Ser Pro Asn Gln Asn Glu
 260 265 270
 Gly Lys Leu Leu Ser Ile Phe Tyr Ser Ile Val Thr Pro Ser Leu Asn
 275 280 285
 Pro Leu Ile Tyr Thr Val Arg Asn Lys Glu Phe Lys Gly Ala Met Lys
 290 295 300
 Arg Leu Thr Gly Lys Glu Lys Asp Cys Met Glu Lys Arg Gly His
 305 310 315

<210> 175
 <211> 1008
 <212> DNA
 <213> Homo sapiens

<400> 175
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 atgctccttg gggtccctgg gaagcctcag ctggagatga tcatctctgg gggtgtcttt 120
 ttcttctatg caatttcttt gatgggaaat atggtcctta tcctgctgcc attactggat 180
 aaacatctcc aaaccccat atatttcttt cttagaaatc tggctatctt ggatctttgt 240
 tacaccacaa atatagtccc acagatgttg gtcaatgcct ggggtaaaga caagaaaatc 300
 acttttgggtg gctgtgcttt tcaacttttc actaatgtga cgctatgcac ggttgaatgt 360
 atgcttctgg ctgtgatgtc atatgaccca ttcaatgctg tctgcaagcc tctggactat 420
 atgaccataa tgaaccccca actctgtcaa ggctgtgtgg ccatgacctg gttaattggt 480
 gtcactaatt gcatgatact ttccccctgt cctgtgagtc ttctctgatg cggagaccac 540
 cacctggatc actatttttg tgaaatatct gcaatgggtca aaattgcatg tggggctacc 600
 acagtcattg agttgcattg tgttgttgtt gttgttttca ttttcttgc atcacttctt 660
 ctcatctctg tgcatatgg cttcattgct gtggctgtac tcaagatcaa gtctgcagca 720
 ggaagacaaa aagcatttgg gacctgtttc tcccatctca ttgtggtatc catcttctat 780
 gggactgtta gatatatgta tatagagcca ggaaacagtc catctcagga tgagggcaaa 840
 cttctccata tattttactc cattgttact cccaccttga acccaatccc actaagggaat 900
 aaggagttca agtgggccat gaaaaggctt attggaaaag aaaaagggtt tggagacaca 960
 ataggtcact aacatctttt tacaagaaat tcctggccgg gcacggtg 1008

<210> 176
 <211> 313
 <212> PRT
 <213> Homo sapiens

<400> 176
 Met Ile Asn Asp Ser Tyr Phe Gly Trp Leu Met Leu Leu Gly Phe Pro
 1 5 10 15
 Gly Lys Pro Gln Leu Glu Met Ile Ile Ser Gly Val Val Phe Phe Phe
 20 25 30
 Tyr Ala Ile Ser Leu Met Gly Asn Met Val Leu Ile Leu Leu Pro Leu
 35 40 45
 Leu Asp Lys His Leu Gln Thr Pro Ile Tyr Phe Phe Leu Arg Asn Leu
 50 55 60
 Ala Ile Leu Asp Leu Cys Tyr Thr Thr Asn Ile Val Pro Gln Met Leu
 65 70 75 80
 Val Asn Ala Trp Gly Lys Asp Lys Lys Ile Thr Phe Gly Gly Cys Ala
 85 90 95
 Phe Gln Leu Phe Thr Asn Val Thr Leu Cys Thr Val Glu Cys Met Leu
 100 105 110
 Leu Ala Val Met Ser Tyr Asp Pro Phe Asn Ala Val Cys Lys Pro Leu
 115 120 125

Asp Tyr Met Thr Ile Met Asn Pro Gln Leu Cys Gln Gly Leu Val Ala
 130 135 140
 Met Thr Trp Leu Ile Gly Val Thr Asn Cys Met Ile Leu Ser Pro Cys
 145 150 155 160
 Pro Val Ser Leu Pro Arg Cys Gly Asp His His Leu Asp His Tyr Phe
 165 170 175
 Cys Glu Ile Ser Ala Met Val Lys Ile Ala Cys Gly Ala Thr Thr Val
 180 185 190
 Met Glu Leu His Cys Val Val Val Val Phe Ile Phe Leu Ala Ser
 195 200 205
 Leu Leu Leu Ile Leu Val Ser Tyr Gly Phe Ile Ala Val Ala Val Leu
 210 215 220
 Lys Ile Lys Ser Ala Ala Gly Arg Gln Lys Ala Phe Gly Thr Cys Phe
 225 230 235 240
 Ser His Leu Ile Val Val Ser Ile Phe Tyr Gly Thr Val Arg Tyr Met
 245 250 255
 Tyr Ile Glu Pro Gly Asn Ser Pro Ser Gln Asp Glu Gly Lys Leu Leu
 260 265 270
 His Ile Phe Tyr Ser Ile Val Thr Pro Thr Leu Asn Pro Ile Pro Leu
 275 280 285
 Arg Asn Lys Glu Phe Lys Trp Ala Met Lys Arg Leu Ile Gly Lys Glu
 290 295 300
 Lys Gly Ser Gly Asp Thr Ile Gly His
 305 310

<210> 177

<211> 1050

<212> DNA

<213> Homo sapiens

<400> 177

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aatgtgtttc tctagttct gaacaggggtg atgggcatga ccaacagcag tgtcaaggga 120
gacttcatcc tgggtgggttt ctctcatcag cccacctgg aaaagatcct ctttgtggct 180
gttttgatat cctatctcct tacccttggt ggaaatacag taattattct gatctgctct 240
gtagacccta aactcaagac acccatgtat tttttcttaa ctcacctctc ctagttgat 300
atctgtttta ccaccagtat tgtcccccag ctgctgtgga acctaaaagg acctgacaaa 360
acaatcacat tcttgggttg tgtcatccag ctctacatct ccctggcatt gggctccact 420
gagtgtgtcc tcttgggttg aatggctttt gatcgctatg ctgcagtttg caaacctctc 480
cactataccg ccgtaatgaa ccctcagctg tgccaggctc tggcaggggt tgcgtggctg 540
agtggagtgg gaaacactct tatccagggc actgtcaccc tctggcttcc tcgctgtgga 600
caccgattgc tccaacattt tcttcgtgag gtaccctcca tgattaagct tgcattgtgtg 660
gacatccatg ataatgaggt tcagctcttt gttgcttcac tggctctgct cctcttgccc 720
ttagtgttaa tactgtgtgc ctatggacat atagccaagg tggtcataag gatcaagtca 780
gtccaggcct ggtgcaaagg cctgggggaca tgtggatccc atttgatagt agtgtccctc 840

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ttctgtggga ccatacacagc tgtctacatc cagtccaaca gttcttatgc ccatagctcat 900
 gggaagtcca tctccctctt ctatacagtt gtgaccccca cctcaatcc tctcatctac 960
 aactgagga ataatgacgt gaaaggagca ctgcgattat ttaacagaga cttaggcaca 1020
 taaaaaatga agcagagtac acagcgctca 1050

<210> 178
 <211> 331
 <212> PRT
 <213> Homo sapiens

<400> 178
 Met Ala Asn Thr Leu Ser Ser Leu Asn Ser Cys Asn Val Phe Leu Leu
 1 5 10 15
 Val Leu Asn Arg Val Met Gly Met Thr Asn Ser Ser Val Lys Gly Asp
 20 25 30
 Phe Ile Leu Val Gly Phe Ser His Gln Pro His Leu Glu Lys Ile Leu
 35 40 45
 Phe Val Ala Val Leu Ile Ser Tyr Leu Leu Thr Leu Val Gly Asn Thr
 50 55 60
 Val Ile Ile Leu Ile Cys Ser Val Asp Pro Lys Leu Lys Thr Pro Met
 65 70 75 80
 Tyr Phe Phe Leu Thr His Leu Ser Leu Val Asp Ile Cys Phe Thr Thr
 85 90 95
 Ser Ile Val Pro Gln Leu Leu Trp Asn Leu Lys Gly Pro Asp Lys Thr
 100 105 110
 Ile Thr Phe Leu Gly Cys Val Ile Gln Leu Tyr Ile Ser Leu Ala Leu
 115 120 125
 Gly Ser Thr Glu Cys Val Leu Leu Ala Val Met Ala Phe Asp Arg Tyr
 130 135 140
 Ala Ala Val Cys Lys Pro Leu His Tyr Thr Ala Val Met Asn Pro Gln
 145 150 155 160
 Leu Cys Gln Ala Leu Ala Gly Val Ala Trp Leu Ser Gly Val Gly Asn
 165 170 175
 Thr Leu Ile Gln Gly Thr Val Thr Leu Trp Leu Pro Arg Cys Gly His
 180 185 190
 Arg Leu Leu Gln His Phe Leu Arg Glu Val Pro Ser Met Ile Lys Leu
 195 200 205
 Ala Cys Val Asp Ile His Asp Asn Glu Val Gln Leu Phe Val Ala Ser
 210 215 220
 Leu Val Leu Leu Leu Leu Pro Leu Val Leu Ile Leu Leu Ser Tyr Gly
 225 230 235 240

Phe Ile Leu Leu Gly Phe Ser Asp Arg Pro Trp Leu Glu Thr Pro Leu
35 40 45
Cys Val Ile Phe Leu Val Ala Tyr Ile Phe Ser Leu Phe Gly Asn Ile
50 55 60
Ser Ile Ile Leu Val Ser His Leu Asp Pro Gln Leu Asp Ser Pro Met
65 70 75 80
Tyr Phe Phe Val Ser Asn Leu Ser Phe Leu Asp Leu Cys Tyr Thr Thr
85 90 95
Ser Thr Val Pro Gln Met Leu Val Asn Leu Arg Gly Pro Glu Lys Thr
100 105 110
Ile Ser Tyr Gly Gly Cys Val Ala Gln Leu Tyr Ile Phe Leu Ala Leu
115 120 125
Gly Ser Thr Glu Cys Ile Leu Leu Ala Ile Met Ala Phe Asp Arg Tyr
130 135 140
Ala Ala Ile Cys Lys Pro Leu His Tyr Pro Val Ile Met Asn His Arg
145 150 155 160
Arg Cys Ile His Met Ala Ala Gly Thr Trp Ile Ser Gly Phe Ala Asn
165 170 175
Ser Leu Val Gln Ser Thr Leu Thr Val Val Ala Pro Arg Cys Gly Gln
180 185 190
Arg Val Leu Asp His Phe Phe Cys Glu Val Pro Ala Leu Leu Lys Leu
195 200 205
Ala Cys Ile Asp Ile Arg Val Asn Glu Met Glu Leu Asn Val Leu Gly
210 215 220
Ala Leu Leu Leu Leu Met Pro Leu Thr Leu Ile Leu Gly Thr Tyr Val
225 230 235 240
Phe Ile Ala Gln Ala Val Met Arg Ile Cys Ser Ala Glu Ser Arg Trp
245 250 255
Lys Ala Phe Asn Thr Cys Ala Ser His Leu Leu Val Val Ser Leu Phe
260 265 270
Tyr Phe Thr Ala Ile Ser Met Tyr Val Gln Pro Pro Ser Ser Tyr Ser
275 280 285
His Asp Arg Gly Lys Ile Ile Met Ala Leu Phe Tyr Gly Ile Val Thr
290 295 300
Pro Thr Leu Asn Pro Phe Ile Tyr Thr Leu Arg Asn Lys Asp Val Lys
305 310 315 320
Ala Ala Leu Arg Arg Ser Leu Thr Lys Glu Phe Trp Ile Lys Thr Arg
325 330 335

<210> 181
 <211> 1014
 <212> DNA
 <213> Homo sapiens

<400> 181
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 ctgacccctgg ccatgtatct ggtgactatt ttaggaaaca ccctcattct tcttctgac 180
 agactggaca acaggcttca taccctcatg tacttctccc ttagtggtct gtcattttgtg 240
 gacttttggt atacaaagag tattgtccca caaatgctgt cccacttget ctcagcccca 300
 aagtccatcc cattctacag ttgtgtgctc cagctctatg tttctctggc attgtgtggg 360
 tctgagttct tcctgctggg ggccatggcc tatgaccgt acgtggccgt gtgccacca 420
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 tccagcttcc tgtgtcacgg tggttatcaat cactttgtct gtgagacctt agcagtgtga 600
 cagctagcct gtgtggatgt ccccttcaac aaggtcatgg tggccatctc aggggtttctg 660
 gtgaccttgc ttccctgttc cctggttcta ttctcctatg cttgcatagt tgccaccatt 720
 ttgtgcattc gttctacca ggtacgctgc aaagcctttg ggacctgtgc ctctcacctc 780
 attgtggttt gcatgtgctt tggggctacc atctgcacct acctggggcc acagtgggcc 840
 tcctcagcag aggaagagaa gatgattgct ctcttctatg gagtgggtgc acccatgttg 900
 aacccttga tctacagctt gaggaataag gaagttacgg ctgctgtccg gaaagtttta 960
 gaaagatgca gataaagggt caagactcta agaacctctt gttatctatc atca 1014

<210> 182
 <211> 315
 <212> PRT
 <213> Homo sapiens

<400> 182
 Met Gly Gln Glu Asn Lys Asn Gln Thr Trp Val Ser Glu Phe Ile Leu
 1 5 10 15
 Leu Gly Ile Ser Ser Asp Trp Gly Ile Gln Val Ser Leu Phe Ala Leu
 20 25 30
 Ile Leu Ala Met Tyr Leu Val Thr Ile Leu Gly Asn Thr Leu Ile Leu
 35 40 45
 Leu Leu Ile Arg Leu Asp Asn Arg Leu His Thr Pro Met Tyr Phe Ser
 50 55 60
 Leu Ser Val Leu Ser Phe Val Asp Phe Cys Tyr Thr Lys Ser Ile Val
 65 70 75 80
 Pro Gln Met Leu Ser His Leu Leu Ser Ala Arg Lys Ser Ile Pro Phe
 85 90 95
 Tyr Ser Cys Val Leu Gln Leu Tyr Val Ser Leu Ala Leu Cys Gly Ser
 100 105 110
 Glu Phe Phe Leu Leu Gly Ala Met Ala Tyr Asp Arg Tyr Val Ala Val

115	120	125
Cys His Pro Leu His Tyr Thr Val Ile Met His Gly Gly Leu Cys Leu		
130	135	140
Gly Leu Ala Ala Ser Arg Leu Val Ala Gly Phe Ser Asn Ser Leu Met		
145	150	155
Glu Thr Ile Ile Thr Phe Gln Leu Leu Ser Pro Ser Ser Phe Leu Cys		
	165	170
His Gly Val Ile Asn His Phe Val Cys Glu Thr Leu Ala Val Leu Gln		
	180	185
Leu Ala Cys Val Asp Val Pro Phe Asn Lys Val Met Val Ala Ile Ser		
	195	200
Gly Phe Leu Val Ile Leu Leu Pro Cys Ser Leu Val Leu Phe Ser Tyr		
	210	215
Ala Cys Ile Val Ala Thr Ile Leu Cys Ile Arg Ser Thr Gln Val Arg		
	225	230
Cys Lys Ala Phe Gly Thr Cys Ala Ser His Leu Ile Val Val Cys Met		
	245	250
Cys Phe Gly Ala Thr Ile Cys Thr Tyr Leu Gly Pro Gln Leu Ala Ser		
	260	265
Ser Ala Glu Glu Glu Lys Met Ile Ala Leu Phe Tyr Gly Val Val Ser		
	275	280
Pro Met Leu Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Glu Val Thr		
	290	295
Ala Ala Val Arg Lys Val Leu Glu Arg Cys Arg		
305	310	315

<210> 183

<211> 1151

<212> DNA

<213> Homo sapiens

<400> 183

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ctttaggttt tccgaaggtc aacaatgaaa aacagaacca tgtttggtga gtttattcta 180
ctgggcctta caaatcaacc tgaactccaa gtgatgatat tcatctttct gttcctcacc 240
tacatgctaa gtgtcctagg aaatctgact attatcacc tcaccttact agacccccac 300
ctccagaccc ccatgtattt cttcctccgg aattttctct tcttagaaat ttccttcaca 360
tccattttta ttcccagatt tctgaccagc atgacaacag gaaataaagt tatcagcttt 420
gctggctgct tgactcagta tttttttgct atatttcttg gagctaccga gttttacctc 480
ctggcctcca tgtcttatga tcgttatgtg gccatctgca aacccttgca ttacctgact 540
attatgagca gcagagtctg catacaacta gtgttctgct cctgggttggg gggattccta 600
gcaatcttac caccaatcat cctgatgacc caggtagatt tctgtgtctc caacattctg 660
aatcactatt actgtgacta tgggcctctc gtggagcttg cctgctcaga cacaagcctc 720

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ttagaactga tgggtcatcct cttggccggt gtgactctca tgggttactct ggtgctgggtg 780
acactttctt acacatacat tatcaggact attctgagga tcccttccgc ccagcaaagg 840
acaaaggcct tttccacttg ttctcccccac atgattgtca tctccctctc ttatggcagc 900
tgcattgttta tgtacattaa tcctttctgca aaagaaggag gtgctttcaa caaaggaata 960
gctgtactca ttacttcggt tactccctta ctgaatccct tcatatatac ttaagaaat 1020
cagcaagtga aacaagcttt caaggactca gtcaaaaaga ttgtgaaact ttaaaaaagg 1080
agattacact tcaaaataca ttttactta acaaatatgc attgaatgac tatatttcaa 1140
gtgctaaatt g 1151

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<210> 184
 <211> 309
 <212> PRT
 <213> Homo sapiens

<400> 184

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Met Lys Asn Arg Thr Met Phe Gly Glu Phe Ile Leu Leu Gly Leu Thr
  1             5             10             15

Asn Gln Pro Glu Leu Gln Val Met Ile Phe Ile Phe Leu Phe Leu Thr
      20             25             30

Tyr Met Leu Ser Val Leu Gly Asn Leu Thr Ile Ile Thr Leu Thr Leu
      35             40             45

Leu Asp Pro His Leu Gln Thr Pro Met Tyr Phe Phe Leu Arg Asn Phe
      50             55             60

Ser Phe Leu Glu Ile Ser Phe Thr Ser Ile Phe Ile Pro Arg Phe Leu
      65             70             75             80

Thr Ser Met Thr Thr Gly Asn Lys Val Ile Ser Phe Ala Gly Cys Leu
      85             90             95

Thr Gln Tyr Phe Phe Ala Ile Phe Leu Gly Ala Thr Glu Phe Tyr Leu
      100            105            110

Leu Ala Ser Met Ser Tyr Asp Arg Tyr Val Ala Ile Cys Lys Pro Leu
      115            120            125

His Tyr Leu Thr Ile Met Ser Ser Arg Val Cys Ile Gln Leu Val Phe
      130            135            140

Cys Ser Trp Leu Gly Gly Phe Leu Ala Ile Leu Pro Pro Ile Ile Leu
      145            150            155            160

Met Thr Gln Val Asp Phe Cys Val Ser Asn Ile Leu Asn His Tyr Tyr
      165            170            175

Cys Asp Tyr Gly Pro Leu Val Glu Leu Ala Cys Ser Asp Thr Ser Leu
      180            185            190

Leu Glu Leu Met Val Ile Leu Leu Ala Val Val Thr Leu Met Val Thr
      195            200            205

Leu Val Leu Val Thr Leu Ser Tyr Thr Tyr Ile Ile Arg Thr Ile Leu
      210            215            220

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Arg Ile Pro Ser Ala Gln Gln Arg Thr Lys Ala Phe Ser Thr Cys Ser
 225 230 235 240
 Ser His Met Ile Val Ile Ser Leu Ser Tyr Gly Ser Cys Met Phe Met
 245 250 255
 Tyr Ile Asn Pro Ser Ala Lys Glu Gly Gly Ala Phe Asn Lys Gly Ile
 260 265 270
 Ala Val Leu Ile Thr Ser Val Thr Pro Leu Leu Asn Pro Phe Ile Tyr
 275 280 285
 Thr Leu Arg Asn Gln Gln Val Lys Gln Ala Phe Lys Asp Ser Val Lys
 290 295 300
 Lys Ile Val Lys Leu
 305

<210> 185
 <211> 1601
 <212> DNA
 <213> Homo sapiens

<400> 185
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 taaacatata agtaaagtct acacatatga gactgttttc ttgatagatc atggaaggaa 180
 aaatccattc agggaaaaaa aagggaata ctatataaat gtcaaaaatc cagtcttttt 240
 aagagacatt ctctggaaat atctctatct tgagggtgtag tagattatct tacatatata 300
 tccactcaca cataccttcc agttagaaca ctgaagcctc atcattgtaa ttaaagcaat 360
 aaattttgta aaaatgaaaa ggataattgt gggaggagat tctaaacact ctttttctaa 420
 tgagctgctc tgtgtcgcca ggggaaacat ggttgagtaa ggcatcacat ttttgacatg 480
 gagcttctga caaataatct caaatttatc attgaccctt ttgtttacag gttctgacac 540
 cttagtccaa taccttcaga agaacacatg gaaaatagga aaaattgact taattcatcc 600
 tcttggggct cacacagaac cctgagggcc aaaaagtttt atttgtcaca ttcttactca 660
 tctacattgt gacgataatg ggcaacctcc ttatcatggt gaccatcatg gccagccagt 720
 ccttgggttc ccccatgtac ttttttctgg cttctttatc atttatacat accgtctatt 780
 atactgccat tgctcccaaa atgattgttg acctgctctc tgagaaaaag accatttctt 840
 ttcagggttg tatggctcaa ctttttatgg atcatttatt tgctgggtgct gaggtcattc 900
 ttctgggttg aatggcctat gatcaatatg tggccatctg taagcctctt cattatttga 960
 tcatcatgaa tcgtcgagtc tgtgttctca tgctgttggt ggcttggtt ggaggctttc 1020
 ttcactcatt ggttcaattt ctctttatct atcagctccc tttctgtgga cccaatgtca 1080
 ttgacaactt cctgtgtgat ttgtatccct tattgaaact tgcttgacc aatacctatg 1140
 tcaactgggt ttctatgata gctaattggt gagcgatttg tactgtcacc ttcttccctc 1200
 tcctgtcttc ctatggggtc atattaccct ctcttaagac tcagagtttg gaagggaaat 1260
 gcaaagcttt ctacacctgt gcatcccaca tcaactgtat cactttattc tttgtcccct 1320
 gcatcttcct gtttgaagg cccaactcca cttttcccat tgataaatcc atgactgttg 1380
 ttttaacttg tataactccc atgctgaaac cactaatcta tgccctgagg aatgcagaaa 1440
 tgaaggtgc catgaggaaa ctttgagtg aaaaagtaag cttagctgga aaagggctgt 1500
 atccctcatg agaatatgac tttcattctt tcacagaagc aaggaataat ttcactatcc 1560
 tatcagatta catttctgtt atcattcgcc tttagttatt t 1601

<210> 186
 <211> 277

<212> PRT

<213> Homo sapiens

<400> 186

Met	Gly	Asn	Leu	Leu	Ile	Met	Val	Thr	Ile	Met	Ala	Ser	Gln	Ser	Leu	
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Gly	Ser	Pro	Met	Tyr	Phe	Phe	Leu	Ala	Ser	Leu	Ser	Phe	Ile	His	Thr	
			20					25					30			
Val	Tyr	Tyr	Thr	Ala	Ile	Ala	Pro	Lys	Met	Ile	Val	Asp	Leu	Leu	Ser	
		35					40					45				
Glu	Lys	Lys	Thr	Ile	Ser	Phe	Gln	Gly	Cys	Met	Ala	Gln	Leu	Phe	Met	
	50					55					60					
Asp	His	Leu	Phe	Ala	Gly	Ala	Glu	Val	Ile	Leu	Leu	Val	Val	Met	Ala	
65					70					75					80	
Tyr	Asp	Gln	Tyr	Val	Ala	Ile	Cys	Lys	Pro	Leu	His	Tyr	Leu	Ile	Ile	
				85					90					95		
Met	Asn	Arg	Arg	Val	Cys	Val	Leu	Met	Leu	Leu	Val	Ala	Trp	Ile	Gly	
			100					105					110			
Gly	Phe	Leu	His	Ser	Leu	Val	Gln	Phe	Leu	Phe	Ile	Tyr	Gln	Leu	Pro	
		115					120					125				
Phe	Cys	Gly	Pro	Asn	Val	Ile	Asp	Asn	Phe	Leu	Cys	Asp	Leu	Tyr	Pro	
	130					135					140					
Leu	Leu	Lys	Leu	Ala	Cys	Thr	Asn	Thr	Tyr	Val	Thr	Gly	Leu	Ser	Met	
145					150					155					160	
Ile	Ala	Asn	Gly	Gly	Ala	Ile	Cys	Thr	Val	Thr	Phe	Phe	Pro	Leu	Leu	
				165					170					175		
Leu	Ser	Tyr	Gly	Val	Ile	Leu	Pro	Ser	Leu	Lys	Thr	Gln	Ser	Leu	Glu	
			180					185					190			
Gly	Lys	Cys	Lys	Ala	Phe	Tyr	Thr	Cys	Ala	Ser	His	Ile	Thr	Val	Ile	
		195					200					205				
Thr	Leu	Phe	Phe	Val	Pro	Cys	Ile	Phe	Leu	Phe	Val	Arg	Pro	Asn	Ser	
	210					215					220					
Thr	Phe	Pro	Ile	Asp	Lys	Ser	Met	Thr	Val	Val	Leu	Thr	Cys	Ile	Thr	
225					230					235				240		
Pro	Met	Leu	Lys	Pro	Leu	Ile	Tyr	Ala	Leu	Arg	Asn	Ala	Glu	Met	Lys	
				245					250					255		
Ser	Ala	Met	Arg	Lys	Leu	Trp	Ser	Glu	Lys	Val	Ser	Leu	Ala	Gly	Lys	
			260					265						270		
Gly	Leu	Tyr	Pro	Ser												
		275														

<210> 187
 <211> 1006
 <212> DNA
 <213> Homo sapiens

<400> 187
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 ggctgcagta cctgctcttc ctctctctcc tgctcaccta cctctttgtc ctggtggaga 180
 acctggccat catcctcatc gtctggagca gcacctccct ccacaggccc atgtactact 240
 ttctgagctc catgtctttc ctggagatct ggtacgtgtc tgacatcacc cccaagatgc 300
 tggagggcct cctcctccag cagaaacgca tctctttcgt cgggtgcatg acgcagctct 360
 acttcttcag ctccctgggt tgcaccgagt gtgtgcttct ggcctccatg gcctacgacc 420
 gctacgtggc catctgccac ccgctgcgct accacgtcct tgtgaccccg gggctgtgcc 480
 tccagctggg gggcttctcc tttgtgagtg gcttcacat ctccatgatc aaggtctgtt 540
 ttatctccag cgtcacgttc tgtggctcca acgtcttgaa ccacttcttc tgtgacattt 600
 ccccatcct caagctggcc tgcacggact tctccactgc agagctgggt gatttcatcc 660
 tggccttcat catcctgggt tttccgctcc tggccacat actgtcatat tggcacatca 720
 ccttggctgt cctgcgcac cctcggcca ccgctgctg gagagccttc tctacctgcg 780
 cctctcacct caccgtgggt accgtcttct atacagcctt gcttttcatg tatgtccggc 840
 cccaagccat tgattcccag agctccaaca agctcatctc tgccgtgtac actgttgtca 900
 cgccaataat taaccctttg atttactgcc tgaggaacaa ggaatttaag gacgccttga 960
 aaaaggcctt gggcttgggt caaacttcac actaagacaa ctaaat 1006

<210> 188
 <211> 324
 <212> PRT
 <213> Homo sapiens

<400> 188
 Met Phe Cys Arg Pro Ala Ala Pro Lys His Arg Gly Met Ser Gly Glu
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 Asn Val Thr Lys Val Ser Thr Phe Ile Leu Val Gly Leu Pro Thr Ala
 20 25 30
 Pro Gly Leu Gln Tyr Leu Leu Phe Leu Leu Phe Leu Leu Thr Tyr Leu
 35 40 45
 Phe Val Leu Val Glu Asn Leu Ala Ile Ile Leu Ile Val Trp Ser Ser
 50 55 60
 Thr Ser Leu His Arg Pro Met Tyr Tyr Phe Leu Ser Ser Met Ser Phe
 65 70 75 80
 Leu Glu Ile Trp Tyr Val Ser Asp Ile Thr Pro Lys Met Leu Glu Gly
 85 90 95
 Phe Leu Leu Gln Gln Lys Arg Ile Ser Phe Val Gly Cys Met Thr Gln
 100 105 110
 Leu Tyr Phe Phe Ser Ser Leu Val Cys Thr Glu Cys Val Leu Leu Ala
 115 120 125

Ser Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His Pro Leu Arg Tyr
 130 135 140
 His Val Leu Val Thr Pro Gly Leu Cys Leu Gln Leu Val Gly Phe Ser
 145 150 155 160
 Phe Val Ser Gly Phe Thr Ile Ser Met Ile Lys Val Cys Phe Ile Ser
 165 170 175
 Ser Val Thr Phe Cys Gly Ser Asn Val Leu Asn His Phe Phe Cys Asp
 180 185 190
 Ile Ser Pro Ile Leu Lys Leu Ala Cys Thr Asp Phe Ser Thr Ala Glu
 195 200 205
 Leu Val Asp Phe Ile Leu Ala Phe Ile Ile Leu Val Phe Pro Leu Leu
 210 215 220
 Ala Thr Ile Leu Ser Tyr Trp His Ile Thr Leu Ala Val Leu Arg Ile
 225 230 235 240
 Pro Ser Ala Thr Gly Cys Trp Arg Ala Phe Ser Thr Cys Ala Ser His
 245 250 255
 Leu Thr Val Val Thr Val Phe Tyr Thr Ala Leu Leu Phe Met Tyr Val
 260 265 270
 Arg Pro Gln Ala Ile Asp Ser Gln Ser Ser Asn Lys Leu Ile Ser Ala
 275 280 285
 Val Tyr Thr Val Val Thr Pro Ile Ile Asn Pro Leu Ile Tyr Cys Leu
 290 295 300
 Arg Asn Lys Glu Phe Lys Asp Ala Leu Lys Lys Ala Leu Gly Leu Gly
 305 310 315 320
 Gln Thr Ser His

<210> 189
 <211> 1039
 <212> DNA
 <213> Homo sapiens

<400> 189
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 atgatgtccg tgcttccctg tacagtttaa tgggtgctcat aattctgacc acactcgttg 120
 gcaatctgat agttattggt tctatatcac acttcaaaca acttcataacc ccaacaaatt 180
 ggctcattca ttccatggcc actgtggact ttcttctggg gtgtctggtc atgccttaca 240
 gtatggtgag atctgctgag cactgttggg attttggaga agtcttctgt aaaattcaca 300
 caagcaccga cattatgctg agctcagcct ccattttcca tttgtctttc atctccattg 360
 accgctacta tgctgtgtgt gatccactga gatataaagc caagatgaat atcttggtta 420
 tttgtgtgat gatcttcatt agttggagtg tccctgctgt ttttgcatth ggaatgatct 480
 ttctggagct aaacttcaaa ggcgctgaag agatatatta caaacatggt cactgcagag 540
 gaggttgctc tgtcttcttt agcaaaatat ctgggggtact gacctttatg acttcttttt 600
 atatacctgg atctattatg ttatgtgtct attacagaat atatcttatc gctaaagaac 660


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aggcaagatt aattagtgat gccaatcaga agctccaaat tggattggaa atgaaaaatg 720
gaatttcaca aagcaaagaa aggaaagctg tgaagacatt ggggattgtg atgggagttt 780
tcctaatatg ctggtgccct ttctttatct gtacagtcac ggaccctttt cttcactaca 840
ttattccacc tactttgaat gatgtattga tttggtttgg ctacttgaac tctacattta 900
atccaatggg ttatgcattt ttctatcctt ggttttagaaa agcactgaag atgatgctgt 960
ttggtaaaat tttccaaaaa gattcatcca ggtgtaaatt atttttggaa ttgagttcat 1020
agaattatta tattttact 1039

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<210> 190
<211> 339
<212> PRT
<213> Homo sapiens

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<400> 190
Met Met Pro Phe Cys His Asn Ile Ile Asn Ile Ser Cys Val Lys Asn
 1             5             10             15

Asn Trp Ser Asn Asp Val Arg Ala Ser Leu Tyr Ser Leu Met Val Leu
      20             25             30

Ile Ile Leu Thr Thr Leu Val Gly Asn Leu Ile Val Ile Val Ser Ile
      35             40             45

Ser His Phe Lys Gln Leu His Thr Pro Thr Asn Trp Leu Ile His Ser
      50             55             60

Met Ala Thr Val Asp Phe Leu Leu Gly Cys Leu Val Met Pro Tyr Ser
      65             70             75             80

Met Val Arg Ser Ala Glu His Cys Trp Tyr Phe Gly Glu Val Phe Cys
      85             90             95

Lys Ile His Thr Ser Thr Asp Ile Met Leu Ser Ser Ala Ser Ile Phe
      100            105            110

His Leu Ser Phe Ile Ser Ile Asp Arg Tyr Tyr Ala Val Cys Asp Pro
      115            120            125

Leu Arg Tyr Lys Ala Lys Met Asn Ile Leu Val Ile Cys Val Met Ile
      130            135            140

Phe Ile Ser Trp Ser Val Pro Ala Val Phe Ala Phe Gly Met Ile Phe
      145            150            155            160

Leu Glu Leu Asn Phe Lys Gly Ala Glu Glu Ile Tyr Tyr Lys His Val
      165            170            175

His Cys Arg Gly Gly Cys Ser Val Phe Phe Ser Lys Ile Ser Gly Val
      180            185            190

Leu Thr Phe Met Thr Ser Phe Tyr Ile Pro Gly Ser Ile Met Leu Cys
      195            200            205

Val Tyr Tyr Arg Ile Tyr Leu Ile Ala Lys Glu Gln Ala Arg Leu Ile
      210            215            220

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Ser Asp Ala Asn Gln Lys Leu Gln Ile Gly Leu Glu Met Lys Asn Gly
 225 230 235 240
 Ile Ser Gln Ser Lys Glu Arg Lys Ala Val Lys Thr Leu Gly Ile Val
 245 250 255
 Met Gly Val Phe Leu Ile Cys Trp Cys Pro Phe Phe Ile Cys Thr Val
 260 265 270
 Met Asp Pro Phe Leu His Tyr Ile Ile Pro Pro Thr Leu Asn Asp Val
 275 280 285
 Leu Ile Trp Phe Gly Tyr Leu Asn Ser Thr Phe Asn Pro Met Val Tyr
 290 295 300
 Ala Phe Phe Tyr Pro Trp Phe Arg Lys Ala Leu Lys Met Met Leu Phe
 305 310 315 320
 Gly Lys Ile Phe Gln Lys Asp Ser Ser Arg Cys Lys Leu Phe Leu Glu
 325 330 335
 Leu Ser Ser

<210> 191
 <211> 1039
 <212> DNA
 <213> Homo sapiens

<400> 191
 gaatgatgcc cttttgccac aatataatta atattttcctg tgtgaaaaaac aactgggtcaa 60
 atgatgtccg tgcttccctg tacagtttaa tgggtgctcat aattctgacc aactcgttg 120
 gcaatctgat agttattgtt tctatatcac acttcaaaca acttcatacc ccaacaaatt 180
 ggctcattca ttccatggcc actgtggact ttcttctggg gtgtctggtc atgccttaca 240
 gtatggtgag atctgctgag cactgttggt attttggaga agtcttctgt aaaattcaca 300
 caagcaccca cattatgctg agctcagcct ccatTTTTCCA tttgtctttc atctccattg 360
 accgctacta tgctgtgtgt gatccactga gatataaagc caagatgaat atcttgggta 420
 tttgtgtgat gatcttcatt agttggagtg tccctgctgt ttttgcattt ggaatgatct 480
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 gaggttgctc tgtcttcttt agcaaaaatat ctgggggtact gacctttatg acttcttttt 600
 atatacctgg atctattatg ttatgtgtct attacagaat atatcttatc gctaaagaac 660
 aggcaagatt aattagtgat gccaatcaga agctccaaat tggattggaa atgaaaaatg 720
 gaatttcaca aagcaaagaa aggaaagctg tgaagacatt ggggattgtg atgggagttt 780
 tctaataatg ctggtgccct ttctttatct gtacagtcac ggaccctttt cttcactaca 840
 ttattccacc tactttgaat gatgtattga tttgggtttg ctacttgaac tctacattta 900
 atccaatggt ttatgcattt ttctatcctt ggttttagaaa agcactgaag atgatgctgt 960
 ttggtaaaat tttccaaaaa gattcatcca ggtgtaaatt atttttggaa ttgagttcat 1020
 agaattatta tatttttact 1039

<210> 192
 <211> 339
 <212> PRT
 <213> Homo sapiens

<400> 192

Met Met Pro Phe Cys His Asn Ile Ile Asn Ile Ser Cys Val Lys Asn
 1 5 10 15
 Asn Trp Ser Asn Asp Val Arg Ala Ser Leu Tyr Ser Leu Met Val Leu
 20 25 30
 Ile Ile Leu Thr Thr Leu Val Gly Asn Leu Ile Val Ile Val Ser Ile
 35 40 45
 Ser His Phe Lys Gln Leu His Thr Pro Thr Asn Trp Leu Ile His Ser
 50 55 60
 Met Ala Thr Val Asp Phe Leu Leu Gly Cys Leu Val Met Pro Tyr Ser
 65 70 75 80
 Met Val Arg Ser Ala Glu His Cys Trp Tyr Phe Gly Glu Val Phe Cys
 85 90 95
 Lys Ile His Thr Ser Thr Asp Ile Met Leu Ser Ser Ala Ser Ile Phe
 100 105 110
 His Leu Ser Phe Ile Ser Ile Asp Arg Tyr Tyr Ala Val Cys Asp Pro
 115 120 125
 Leu Arg Tyr Lys Ala Lys Met Asn Ile Leu Val Ile Cys Val Met Ile
 130 135 140
 Phe Ile Ser Trp Ser Val Pro Ala Val Phe Ala Phe Gly Met Ile Phe
 145 150 155 160
 Leu Glu Leu Asn Phe Lys Gly Ala Glu Glu Ile Tyr Tyr Lys His Val
 165 170 175
 His Cys Arg Gly Gly Cys Ser Val Phe Phe Ser Lys Ile Ser Gly Val
 180 185 190
 Leu Thr Phe Met Thr Ser Phe Tyr Ile Pro Gly Ser Ile Met Leu Cys
 195 200 205
 Val Tyr Tyr Arg Ile Tyr Leu Ile Ala Lys Glu Gln Ala Arg Leu Ile
 210 215 220
 Ser Asp Ala Asn Gln Lys Leu Gln Ile Gly Leu Glu Met Lys Asn Gly
 225 230 235 240
 Ile Ser Gln Ser Lys Glu Arg Lys Ala Val Lys Thr Leu Gly Ile Val
 245 250 255
 Met Gly Val Phe Leu Ile Cys Trp Cys Pro Phe Phe Ile Cys Thr Val
 260 265 270
 Met Asp Pro Phe Leu His Tyr Ile Ile Pro Pro Thr Leu Asn Asp Val
 275 280 285
 Leu Ile Trp Phe Gly Tyr Leu Asn Ser Thr Phe Asn Pro Met Val Tyr
 290 295 300

Ala Phe Phe Tyr Pro Trp Phe Arg Lys Ala Leu Lys Met Met Leu Phe
 305 310 315 320

Gly Lys Ile Phe Gln Lys Asp Ser Ser Arg Cys Lys Leu Phe Leu Glu
 325 330 335

Leu Ser Ser

<210> 193
 <211> 1033
 <212> DNA
 <213> Homo sapiens

<400> 193
 aaccatgacc agcaattttt cccaacctgt tgtgcagctt tgctatgagg atgtgaatgg 60
 atcttgtatt gaaactccct attctcctgg gtcccgggta attctgtaca cggcggttag 120
 ctttgggtct ttgctggctg tatttggaat tctcttagta atgacttctg ttcttcattt 180
 taagcagctg cactctccaa ccaattttct cattgcctct ctggcctgtg ctgacttctt 240
 ggtaggtgtg actgtgatgc ttttcagcat ggtcaggacg gtggagagct gctgggtattt 300
 tggagccaaa ttttgtactc ttcacagttg ctgtgatgtg gcattttgtt actcttctgt 360
 cctccacttg tgcttcatct gcatcgacag gtacattgtg gttactgatc ccctgggtcta 420
 tgctaccaag ttcaccgtgt ctgtgtcggg aatttgcac agcgtgtcct ggattctgcc 480
 tctcacgtac agcgggtgctg tgttctacac aggtgtcaat gatgatgggc tggaggaatt 540
 agtaagtgtc ctcaactgctg taggtggctg tcaaattatt gtaagtcaag gctgggtgtt 600
 gatagatttt ctgttattct tcatacctac ccttgttatg ataattcttt acagtaagat 660
 ttttcttata gctaaacaac aagctataaa aattgaaact actagtagca aagtagaatc 720
 atcctcagag agttataaaa tcagagtggc caagagagag aggaaagcag ctaaaaccct 780
 ggggggtcacg gtactagcat ttgttatttc atggttaccg tatacagttg atatattaat 840
 tgatgccttt atgggcttcc tgaccctgc ctatatctat gaaatttgct gttggagtgc 900
 ttattataac tcagccatga atcctttgat ttatgctcta ttttatcctt ggtttaggaa 960
 agccataaaa cttattttta gtggagatgt ttttaaaggct agttcatcaa ccattagttt 1020
 atttttagaa taa 1033

<210> 194
 <211> 342
 <212> PRT
 <213> Homo sapiens

<400> 194
 Met Thr Ser Asn Phe Ser Gln Pro Val Val Gln Leu Cys Tyr Glu Asp
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 Val Asn Gly Ser Cys Ile Glu Thr Pro Tyr Ser Pro Gly Ser Arg Val
 20 25 30
 Ile Leu Tyr Thr Ala Phe Ser Phe Gly Ser Leu Leu Ala Val Phe Gly
 35 40 45
 Asn Leu Leu Val Met Thr Ser Val Leu His Phe Lys Gln Leu His Ser
 50 55 60
 Pro Thr Asn Phe Leu Ile Ala Ser Leu Ala Cys Ala Asp Phe Leu Val
 65 70 75 80

Gly Val Thr Val Met Leu Phe Ser Met Val Arg Thr Val Glu Ser Cys
 85 90 95
 Trp Tyr Phe Gly Ala Lys Phe Cys Thr Leu His Ser Cys Cys Asp Val
 100 105 110
 Ala Phe Cys Tyr Ser Ser Val Leu His Leu Cys Phe Ile Cys Ile Asp
 115 120 125
 Arg Tyr Ile Val Val Thr Asp Pro Leu Val Tyr Ala Thr Lys Phe Thr
 130 135 140
 Val Ser Val Ser Gly Ile Cys Ile Ser Val Ser Trp Ile Leu Pro Leu
 145 150 155 160
 Thr Tyr Ser Gly Ala Val Phe Tyr Thr Gly Val Asn Asp Asp Gly Leu
 165 170 175
 Glu Glu Leu Val Ser Ala Leu Asn Cys Val Gly Gly Cys Gln Ile Ile
 180 185 190
 Val Ser Gln Gly Trp Val Leu Ile Asp Phe Leu Leu Phe Phe Ile Pro
 195 200 205
 Thr Leu Val Met Ile Ile Leu Tyr Ser Lys Ile Phe Leu Ile Ala Lys
 210 215 220
 Gln Gln Ala Ile Lys Ile Glu Thr Thr Ser Ser Lys Val Glu Ser Ser
 225 230 235 240
 Ser Glu Ser Tyr Lys Ile Arg Val Ala Lys Arg Glu Arg Lys Ala Ala
 245 250 255
 Lys Thr Leu Gly Val Thr Val Leu Ala Phe Val Ile Ser Trp Leu Pro
 260 265 270
 Tyr Thr Val Asp Ile Leu Ile Asp Ala Phe Met Gly Phe Leu Thr Pro
 275 280 285
 Ala Tyr Ile Tyr Glu Ile Cys Cys Trp Ser Ala Tyr Tyr Asn Ser Ala
 290 295 300
 Met Asn Pro Leu Ile Tyr Ala Leu Phe Tyr Pro Trp Phe Arg Lys Ala
 305 310 315 320
 Ile Lys Leu Ile Leu Ser Gly Asp Val Leu Lys Ala Ser Ser Ser Thr
 325 330 335
 Ile Ser Leu Phe Leu Glu
 340

<210> 195
 <211> 1045
 <212> DNA
 <213> Homo sapiens

<400> 195

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cgttatgagc agcaattcat ccctgctggg ggctgtgcag ctgtgctacg cgaacgtgaa 60
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ttttgggagg agtttttgta ctttccacac ctgctgtgat gtggcatttt gttactcttc 360
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gccccctcatg tacagcgggtg ctgtgtttcta cacagggtgc tatgacgatg ggctggagga 540
attatctgat gccctaaact gtataggagg ttgtcagacc gttgtaaatc aaaactgggt 600
gttgacagat tttctatcct tctttatacc tacctttatt atgataattc tgtatggtaa 660
catatttctt gtggctagac gacaggcgaa aaagatagaa aatactggta gcaagacaga 720
atcatcctca gagagttaca aagccagagt ggccaggaga gagagaaaag cagctaaaac 780
cctggggggtc acagtggtag catttatgat ttcattggtta ccatatagca ttgattcatt 840
aattgatgcc tttatgggct ttataacccc tgctgtattt tatgagattt gctgttggtg 900
tgcttattat aactcagcca tgaatccttt gatttatgct ttattttacc catgggttag 960
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<210> 196

<211> 345

<212> PRT

<213> Homo sapiens

<400> 196

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Asn Val Asn Gly Ser Cys Val Lys Ile Pro Phe Ser Pro Gly Ser Arg
      20             25             30

Val Ile Leu Tyr Ile Val Phe Gly Phe Gly Ala Val Leu Ala Val Phe
      35             40             45

Gly Asn Leu Leu Val Met Ile Ser Ile Leu His Phe Lys Gln Leu His
      50             55             60

Ser Pro Thr Asn Phe Leu Val Ala Ser Leu Ala Cys Ala Asp Phe Leu
      65             70             75             80

Val Gly Val Thr Val Met Pro Phe Ser Met Val Arg Thr Val Glu Ser
      85             90             95

Cys Trp Tyr Phe Gly Arg Ser Phe Cys Thr Phe His Thr Cys Cys Asp
      100            105            110

Val Ala Phe Cys Tyr Ser Ser Leu Phe His Leu Cys Phe Ile Ser Ile
      115            120            125

Asp Arg Tyr Ile Ala Val Thr Asp Pro Leu Val Tyr Pro Thr Lys Phe
      130            135            140

Thr Val Ser Val Ser Gly Ile Cys Ile Ser Val Ser Trp Ile Leu Pro
      145            150            155            160
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Leu Met Tyr Ser Gly Ala Val Phe Tyr Thr Gly Val Tyr Asp Asp Gly
 165 170 175
 Leu Glu Glu Leu Ser Asp Ala Leu Asn Cys Ile Gly Gly Cys Gln Thr
 180 185 190
 Val Val Asn Gln Asn Trp Val Leu Thr Asp Phe Leu Ser Phe Phe Ile
 195 200 205
 Pro Thr Phe Ile Met Ile Ile Leu Tyr Gly Asn Ile Phe Leu Val Ala
 210 215 220
 Arg Arg Gln Ala Lys Lys Ile Glu Asn Thr Gly Ser Lys Thr Glu Ser
 225 230 235 240
 Ser Ser Glu Ser Tyr Lys Ala Arg Val Ala Arg Arg Glu Arg Lys Ala
 245 250 255
 Ala Lys Thr Leu Gly Val Thr Val Val Ala Phe Met Ile Ser Trp Leu
 260 265 270
 Pro Tyr Ser Ile Asp Ser Leu Ile Asp Ala Phe Met Gly Phe Ile Thr
 275 280 285
 Pro Ala Cys Ile Tyr Glu Ile Cys Cys Trp Cys Ala Tyr Tyr Asn Ser
 290 295 300
 Ala Met Asn Pro Leu Ile Tyr Ala Leu Phe Tyr Pro Trp Phe Arg Lys
 305 310 315 320
 Ala Ile Lys Val Ile Val Thr Gly Gln Val Leu Lys Asn Ser Ser Ala
 325 330 335
 Thr Met Asn Leu Phe Ser Glu His Ile
 340 345

<210> 197

<211> 948

<212> DNA

<213> Homo sapiens

<400> 197

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 accataatgg aaaacctgat gctgctgctc atgatcaggg ctgattcttg tctccataag 180
 cccatgtatt tcttcctgag tcacctctct tttgttgatc tctgcttctc ttcagtcatt 240
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 ctggctcagg tcttctttgt gttgtcact gcagggactg aagcctgcct tctctcaggg 360
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 aaacagctgt atatgcacct tgtgtggggc tcatggggac tgggctttct ggacgcactc 480
 atcaatgtcc tcctagctgt aaacatggtc ttttgtgaag ccaaaatcat tcaccactac 540
 agctatgaga tgccatccct cctccctctg tctgctctg atatctccag aagcctcatc 600
 gccttgctct gctccactct cctacatggg ctgggaaact tccttttggg cttcttatcc 660
 tacacccgta taatctctac catcctaagc atcagctcta cctcgggcag aagcaaggcc 720
 ttctccacct gctctgcca cctcactgca gtgacacttt actatggctc aggtttgctc 780
 cgccatctca tgccaaactc aggttcccc atagagttga tcttctctgt gcagtatact 840

gtagtcactc ccatgctgaa ttccctcatc tatagcctga aaaataagga agtgaaggta 900
gctctgaaaa gaactttgga aaaatatttg caatatacca gacgttga 948

<210> 198
<211> 312
<212> PRT
<213> Homo sapiens

<400> 198
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20 25 30
Gly Ile Tyr Leu Leu Thr Ile Met Glu Asn Leu Met Leu Leu Leu Met
35 40 45
Ile Arg Ala Asp Ser Cys Leu His Lys Pro Met Tyr Phe Phe Leu Ser
50 55 60
His Leu Ser Phe Val Asp Leu Cys Phe Ser Ser Val Ile Val Pro Lys
65 70 75 80
Met Leu Glu Asn Leu Leu Ser Gln Arg Lys Thr Ile Ser Val Glu Gly
85 90 95
Cys Leu Ala Gln Val Phe Phe Val Phe Val Thr Ala Gly Thr Glu Ala
100 105 110
Cys Leu Leu Ser Gly Met Ala Tyr Asp Arg His Ala Ala Ile Cys Arg
115 120 125
Pro Leu Leu Tyr Gly Gln Ile Met Gly Lys Gln Leu Tyr Met His Leu
130 135 140
Val Trp Gly Ser Trp Gly Leu Gly Phe Leu Asp Ala Leu Ile Asn Val
145 150 155 160
Leu Leu Ala Val Asn Met Val Phe Cys Glu Ala Lys Ile Ile His His
165 170 175
Tyr Ser Tyr Glu Met Pro Ser Leu Leu Pro Leu Ser Cys Ser Asp Ile
180 185 190
Ser Arg Ser Leu Ile Ala Leu Leu Cys Ser Thr Leu Leu His Gly Leu
195 200 205
Gly Asn Phe Leu Leu Val Phe Leu Ser Tyr Thr Arg Ile Ile Ser Thr
210 215 220
Ile Leu Ser Ile Ser Ser Thr Ser Gly Arg Ser Lys Ala Phe Ser Thr
225 230 235 240
Cys Ser Ala His Leu Thr Ala Val Thr Leu Tyr Tyr Gly Ser Gly Leu
245 250 255

Leu Arg His Leu Met Pro Asn Ser Gly Ser Pro Ile Glu Leu Ile Phe
 260 265 270

Ser Val Gln Tyr Thr Val Val Thr Pro Met Leu Asn Ser Leu Ile Tyr
 275 280 285

Ser Leu Lys Asn Lys Glu Val Lys Val Ala Leu Lys Arg Thr Leu Glu
 290 295 300

Lys Tyr Leu Gln Tyr Thr Arg Arg
 305 310

<210> 199

<211> 1039

<212> DNA

<213> Homo sapiens

<400> 199

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gcaatctgat agttattgtt tctatatcac acttcaaaca acttcatacc ccaacaaatt 180
ggctcattca ttccatggcc actgtggact ttcttctggg gtgtctgggc atgccttaca 240
gtatggtgag atctgctgag cactgttggt attttggaga agtcttctgt aaaattcaca 300
caagcaccga cattatgctg agctcagcct ccattttcca tttgtctttc atctccattg 360
accgctacta tgctgtgtgt gatccactga gatataaagc caagatgaat atcttggtta 420
tttgtgtgat gatcttcatt agttggagt tccctgctgt ttttgcattt ggaatgatct 480
ttctggagct aaacttcaaa ggcgctgaag agatatatta caaacatgtt cactgcagag 540
gaggttgctc tgtcttcttt agcaaaatat ctgggggtact gacctttatg acttcttttt 600
atatacctgg atctattatg ttatgtgtct attacagaat atatcttatc gctaaagaac 660
aggcaagatt aattagtgat gccaatcaga agctccaaat tggattggaa atgaaaaatg 720
gaatttcaca aagcaaagaa aggaaagctg tgaagacatt ggggattgtg atgggagttt 780
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ttattccacc tactttgaat gatgtattga tttggtttgg ctacttgaac tctacattta 900
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<210> 200

<211> 339

<212> PRT

<213> Homo sapiens

<400> 200

Met Met Pro Phe Cys His Asn Ile Ile Asn Ile Ser Cys Val Lys Asn
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Asn Trp Ser Asn Asp Val Arg Ala Ser Leu Tyr Ser Leu Met Val Leu
 20 25 30

Ile Ile Leu Thr Thr Leu Val Gly Asn Leu Ile Val Ile Val Ser Ile
 35 40 45

Ser His Phe Lys Gln Leu His Thr Pro Thr Asn Trp Leu Ile His Ser
 50 55 60

Met Ala Thr Val Asp Phe Leu Leu Gly Cys Leu Val Met Pro Tyr Ser
 65 70 75 80
 Met Val Arg Ser Ala Glu His Cys Trp Tyr Phe Gly Glu Val Phe Cys
 85 90 95
 Lys Ile His Thr Ser Thr Asp Ile Met Leu Ser Ser Ala Ser Ile Phe
 100 105 110
 His Leu Ser Phe Ile Ser Ile Asp Arg Tyr Tyr Ala Val Cys Asp Pro
 115 120 125
 Leu Arg Tyr Lys Ala Lys Met Asn Ile Leu Val Ile Cys Val Met Ile
 130 135 140
 Phe Ile Ser Trp Ser Val Pro Ala Val Phe Ala Phe Gly Met Ile Phe
 145 150 155 160
 Leu Glu Leu Asn Phe Lys Gly Ala Glu Glu Ile Tyr Tyr Lys His Val
 165 170 175
 His Cys Arg Gly Gly Cys Ser Val Phe Phe Ser Lys Ile Ser Gly Val
 180 185 190
 Leu Thr Phe Met Thr Ser Phe Tyr Ile Pro Gly Ser Ile Met Leu Cys
 195 200 205
 Val Tyr Tyr Arg Ile Tyr Leu Ile Ala Lys Glu Gln Ala Arg Leu Ile
 210 215 220
 Ser Asp Ala Asn Gln Lys Leu Gln Ile Gly Leu Glu Met Lys Asn Gly
 225 230 235 240
 Ile Ser Gln Ser Lys Glu Arg Lys Ala Val Lys Thr Leu Gly Ile Val
 245 250 255
 Met Gly Val Phe Leu Ile Cys Trp Cys Pro Phe Phe Ile Cys Thr Val
 260 265 270
 Met Asp Pro Phe Leu His Tyr Ile Ile Pro Pro Thr Leu Asn Asp Val
 275 280 285
 Leu Ile Trp Phe Gly Tyr Leu Asn Ser Thr Phe Asn Pro Met Val Tyr
 290 295 300
 Ala Phe Phe Tyr Pro Trp Phe Arg Lys Ala Leu Lys Met Met Leu Phe
 305 310 315 320
 Gly Lys Ile Phe Gln Lys Asp Ser Ser Arg Cys Lys Leu Phe Leu Glu
 325 330 335
 Leu Ser Ser

<210> 201

<211> 963
 <212> DNA
 <213> Homo sapiens

<400> 201
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 ggaaatttgg actctagact gcacacaccc atgtatgtct tcctgtcaca tctggccatt 180
 gtggacatgt cctatgcctc gagtactgtc cctaagatgc tagcaaactc tgtgatgcac 240
 aaaaaagtca tctcctttgc tccttgcata cttcagactt ttttgtattt ggcgtttgct 300
 attacagagt gtctgatttt ggtgatgatg tgctatgatc ggtatgtggc aatctgtcac 360
 cccttgcaat acaccctcat tatgaactgg agagtgtgca ctgtcctggc ctcaacttgc 420
 tggatattta gctttctctt ggctctgggc catattactc ttattctgag gctgcctttt 480
 tgtggccaca aaagatcaac cacttttttt ttgtggccac aaaagatcaa ccactttttc 540
 tgtcaaatca tgtccgtatt caaattggcc tgtgctgaca ctaggctcaa ccagggtggc 600
 ctatttgagg gttctgcgtt catcttagtg gggccgctct gcctgggtgt ggtctcctac 660
 ttgcacatcc tgggtggccat cttgaggatc cagtctgggg agggccgcag aaaggccttc 720
 tctacctgtc cctcccacct ctgctgtggtg gggcttttct ttggcagcgc cattgtcatg 780
 tacatggccc ccaagtcaag ccattctcaa gaacggagga agatcctttc cctgttttac 840
 agccttttca acccgatcct gaacccctc atctacagcc ttaatgcaga ggtgaaaggg 900
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 gaa 963

<210> 202
 <211> 318
 <212> PRT
 <213> Homo sapiens

<400> 202
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 20 25 30
 Phe Tyr Ser Leu Thr Leu Met Gly Asn Leu Asp Ser Arg Leu His Thr
 35 40 45
 Pro Met Tyr Val Phe Leu Ser His Leu Ala Ile Val Asp Met Ser Tyr
 50 55 60
 Ala Ser Ser Thr Val Pro Lys Met Leu Ala Asn Leu Val Met His Lys
 65 70 75 80
 Lys Val Ile Ser Phe Ala Pro Cys Ile Leu Gln Thr Phe Leu Tyr Leu
 85 90 95
 Ala Phe Ala Ile Thr Glu Cys Leu Ile Leu Val Met Met Cys Tyr Asp
 100 105 110
 Arg Tyr Val Ala Ile Cys His Pro Leu Gln Tyr Thr Leu Ile Met Asn
 115 120 125
 Trp Arg Val Cys Thr Val Leu Ala Ser Thr Cys Trp Ile Phe Ser Phe
 130 135 140

Leu Leu Ala Leu Val His Ile Thr Leu Ile Leu Arg Leu Pro Phe Cys
 145 150 155 160
 Gly His Lys Arg Ser Thr Thr Phe Phe Leu Trp Pro Gln Lys Ile Asn
 165 170 175
 His Phe Phe Cys Gln Ile Met Ser Val Phe Lys Leu Ala Cys Ala Asp
 180 185 190
 Thr Arg Leu Asn Gln Val Val Leu Phe Ala Gly Ser Ala Phe Ile Leu
 195 200 205
 Val Gly Pro Leu Cys Leu Val Leu Val Ser Tyr Leu His Ile Leu Val
 210 215 220
 Ala Ile Leu Arg Ile Gln Ser Gly Glu Gly Arg Arg Lys Ala Phe Ser
 225 230 235 240
 Thr Cys Ser Ser His Leu Cys Val Val Gly Leu Phe Phe Gly Ser Ala
 245 250 255
 Ile Val Met Tyr Met Ala Pro Lys Ser Ser His Ser Gln Glu Arg Arg
 260 265 270
 Lys Ile Leu Ser Leu Phe Tyr Ser Leu Phe Asn Pro Ile Leu Asn Pro
 275 280 285
 Leu Ile Tyr Ser Leu Asn Ala Glu Val Lys Gly Ala Leu Lys Arg Val
 290 295 300
 Leu Trp Lys Gln Arg Ser Ile Glu Glu Ser Phe Glu Ile Ser
 305 310 315

<210> 203
 <211> 971
 <212> DNA
 <213> Homo sapiens

<400> 203
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 tgttcctggg gatttacctc ctgaccataa tggaaaacct gatgctgctg ctcatgatca 180
 gggctgattc ttgtctccat aagcccatgt atttcttctt gattcacctc tcttttgttg 240
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 aaaccatttc agtagagggc tgcttggtc aggtcttctt tgtgtttgtc actgcagga 360
 ctgaagcctg ccttctctca gggatggcct atgaccgcca tgctgccatc tgccgcccac 420
 tactttatgg acagatcatg ggtaaacagc tgtatatgca ccttggtgtg ggctcatggg 480
 gactgggctt tctggacgca ctcatcaatg tctcctagc tgtaaacadg gtcttttgtg 540
 aagccaaaat cattcaccac tacagctatg agatgccatc cctcctccct ctgtcctgct 600
 ctgatatctc cagaagcctc atcgcttgc tctgctccac tctcctacat gggctgggaa 660
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 tgaaaaataa ggaagtgaag gtagctctga aaagaacttt ggaataatat ttgcaatata 960
 ccagacgttg a 971

<210> 204
 <211> 319
 <212> PRT
 <213> Homo sapiens

<400> 204

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Pro	Leu	Gly	Leu	Phe	Cys	Gly	Pro	Pro	Lys	Gln	Ser	Arg	Gly	Phe	Leu
			20					25					30		
Pro	Phe	Phe	Val	Leu	Phe	Leu	Gly	Ile	Tyr	Leu	Leu	Thr	Ile	Met	Glu
		35					40					45			
Asn	Leu	Met	Leu	Leu	Leu	Met	Ile	Arg	Ala	Asp	Ser	Cys	Leu	His	Lys
	50					55					60				
Pro	Met	Tyr	Phe	Phe	Leu	Ser	His	Leu	Ser	Phe	Val	Asp	Leu	Cys	Phe
	65				70					75					80
Ser	Ser	Val	Ile	Val	Pro	Lys	Met	Leu	Glu	Asn	Leu	Leu	Ser	Gln	Arg
			85						90					95	
Lys	Thr	Ile	Ser	Val	Glu	Gly	Cys	Leu	Ala	Gln	Val	Phe	Phe	Val	Phe
			100					105					110		
Val	Thr	Ala	Gly	Thr	Glu	Ala	Cys	Leu	Leu	Ser	Gly	Met	Ala	Tyr	Asp
		115					120					125			
Arg	His	Ala	Ala	Ile	Cys	Arg	Pro	Leu	Leu	Tyr	Gly	Gln	Ile	Met	Gly
	130				135						140				
Lys	Gln	Leu	Tyr	Met	His	Leu	Val	Trp	Gly	Ser	Trp	Gly	Leu	Gly	Phe
145					150					155					160
Leu	Asp	Ala	Leu	Ile	Asn	Val	Leu	Leu	Ala	Val	Asn	Met	Val	Phe	Cys
			165						170					175	
Glu	Ala	Lys	Ile	Ile	His	His	Tyr	Ser	Tyr	Glu	Met	Pro	Ser	Leu	Leu
			180					185					190		
Pro	Leu	Ser	Cys	Ser	Asp	Ile	Ser	Arg	Ser	Leu	Ile	Ala	Leu	Leu	Cys
		195					200					205			
Ser	Thr	Leu	Leu	His	Gly	Leu	Gly	Asn	Phe	Leu	Leu	Val	Phe	Leu	Ser
	210					215						220			
Tyr	Thr	Arg	Ile	Ile	Ser	Thr	Ile	Leu	Ser	Ile	Ser	Ser	Thr	Ser	Gly
225					230					235					240
Arg	Ser	Lys	Ala	Phe	Ser	Thr	Cys	Ser	Ala	His	Leu	Thr	Ala	Val	Thr
			245						250					255	
Leu	Tyr	Tyr	Gly	Ser	Gly	Leu	Leu	Arg	His	Leu	Met	Pro	Asn	Ser	Gly

65		70		75		80									
Leu	Glu	Ile	Trp	Tyr	Val	Ser	Asp	Ile	Thr	Pro	Lys	Met	Leu	Glu	Gly
				85					90					95	
Phe	Leu	Leu	Gln	Gln	Lys	Arg	Ile	Ser	Phe	Val	Gly	Cys	Met	Thr	Gln
			100					105					110		
Leu	Tyr	Phe	Phe	Ser	Ser	Leu	Val	Cys	Thr	Glu	Cys	Val	Leu	Leu	Ala
		115					120					125			
Ser	Met	Ala	Tyr	Asp	Arg	Tyr	Val	Ala	Ile	Cys	His	Pro	Leu	Arg	Tyr
	130					135					140				
His	Val	Leu	Val	Thr	Pro	Gly	Leu	Cys	Leu	Gln	Leu	Val	Gly	Phe	Ser
145					150					155					160
Phe	Val	Ser	Gly	Phe	Thr	Ile	Ser	Met	Ile	Lys	Val	Cys	Phe	Ile	Ser
				165					170					175	
Ser	Val	Thr	Phe	Cys	Gly	Ser	Asn	Val	Leu	Asn	His	Phe	Phe	Cys	Asp
			180					185					190		
Ile	Ser	Pro	Ile	Leu	Lys	Leu	Ala	Cys	Thr	Asp	Phe	Ser	Thr	Ala	Glu
		195					200					205			
Leu	Val	Asp	Phe	Ile	Leu	Ala	Phe	Ile	Ile	Leu	Val	Phe	Pro	Leu	Leu
	210					215					220				
Ala	Thr	Met	Leu	Ser	Tyr	Ala	His	Ile	Thr	Leu	Ala	Val	Leu	Arg	Ile
225					230					235					240
Pro	Ser	Ala	Thr	Gly	Cys	Trp	Arg	Ala	Phe	Phe	Thr	Cys	Ala	Ser	His
				245					250					255	
Leu	Thr	Val	Val	Thr	Val	Phe	Tyr	Thr	Ala	Leu	Leu	Phe	Met	Tyr	Val
			260					265					270		
Arg	Pro	Gln	Ala	Ile	Asp	Ser	Arg	Ser	Ser	Asn	Lys	Leu	Ile	Ser	Val
		275					280					285			
Leu	Tyr	Thr	Val	Ile	Thr	Pro	Ile	Leu	Asn	Pro	Leu	Ile	Tyr	Cys	Leu
	290					295					300				
Arg	Asn	Lys	Glu	Phe	Lys	Asn	Ala	Leu	Lys	Lys	Ala	Phe	Gly	Leu	Thr
305					310					315					320
Ser	Cys	Ala	Val	Glu	Gly	Arg	Leu	Ser	Ser	Leu	Leu	Glu	Leu	His	Leu
				325					330					335	
Gln	Ile	His	Ser	Gln	Pro	Leu									
			340												

<210> 207
 <211> 939
 <212> DNA

<213> Homo sapiens

<400> 207

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ggcaacctgg gcatgaccac actgatttgg ctcagttctc acctgcacac ccctatgtac 180
tatttcctca gcagtctgtc cttcattgac ttctgccatt ccaactgtcat taccctaag 240
atgctggtga actttgtgac agagaagaac atcatctcct accctgaatg catgactcag 300
ctctacttct tcctcgtttt tgctattgca gagtgtcaca tgttggtgc aatggcgat 360
gaccgttaca tggccatctg tagccccttg ctgtacagtg tcatcatatc caataaggct 420
tgcttttctc tgatttttagg ggtgtatata ataggcctgg tttgtgcatc agttcataca 480
ggctgtatgt ttaggggttca attctgcaaa tttgatttga ttaaccatta tttctgtgat 540
cttcttcccc tcctaaagct ctcttgctct agtatctatg tcaacaaact acttattcta 600
tgtgttggtg catttaacat ccttggtcccc agcctgacca tcctttgtgc ttacatcttt 660
attattgcca gcacccctcca cattcgctcc actgagggca ggtccaaagc cttcagcact 720
tgtagctccc acatgttggc ggttgtaatc ttttttggt ctgcagcatt catgtacttg 780
cagccatctt caatcagctc catggaccag gggaaagtat cctctgtgtt ttatactatt 840
attgtgcccc tgttgaaccc tctgatttat agcctgagga ataaagatgt ccatgtttcc 900
ctgaagaaaa tgctacagag aagaacatta ttgtaaaca 939
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<210> 208

<211> 311

<212> PRT

<213> Homo sapiens

<400> 208

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Met Ser Gly Glu Asn Asn Ser Ser Val Thr Glu Phe Ile Leu Ala Gly
  1              5              10             15

Leu Ser Glu Gln Pro Glu Leu Gln Leu Pro Leu Phe Leu Leu Phe Leu
      20              25             30

Gly Ile Tyr Val Val Thr Val Val Gly Asn Leu Gly Met Thr Thr Leu
      35              40             45

Ile Trp Leu Ser Ser His Leu His Thr Pro Met Tyr Tyr Phe Leu Ser
      50              55             60

Ser Leu Ser Phe Ile Asp Phe Cys His Ser Thr Val Ile Thr Pro Lys
      65              70             75             80

Met Leu Val Asn Phe Val Thr Glu Lys Asn Ile Ile Ser Tyr Pro Glu
      85              90             95

Cys Met Thr Gln Leu Tyr Phe Phe Leu Val Phe Ala Ile Ala Glu Cys
      100             105            110

His Met Leu Ala Ala Met Ala Tyr Asp Arg Tyr Met Ala Ile Cys Ser
      115             120            125

Pro Leu Leu Tyr Ser Val Ile Ile Ser Asn Lys Ala Cys Phe Ser Leu
      130             135            140

Ile Leu Gly Val Tyr Ile Ile Gly Leu Val Cys Ala Ser Val His Thr
      145             150            155            160
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Gly Cys Met Phe Arg Val Gln Phe Cys Lys Phe Asp Leu Ile Asn His
 165 170 175
 Tyr Phe Cys Asp Leu Leu Pro Leu Leu Lys Leu Ser Cys Ser Ser Ile
 180 185 190
 Tyr Val Asn Lys Leu Leu Ile Leu Cys Val Gly Ala Phe Asn Ile Leu
 195 200 205
 Val Pro Ser Leu Thr Ile Leu Cys Ser Tyr Ile Phe Ile Ile Ala Ser
 210 215 220
 Ile Leu His Ile Arg Ser Thr Glu Gly Arg Ser Lys Ala Phe Ser Thr
 225 230 235 240
 Cys Ser Ser His Met Leu Ala Val Val Ile Phe Phe Gly Ser Ala Ala
 245 250 255
 Phe Met Tyr Leu Gln Pro Ser Ser Ile Ser Ser Met Asp Gln Gly Lys
 260 265 270
 Val Ser Ser Val Phe Tyr Thr Ile Ile Val Pro Met Leu Asn Pro Leu
 275 280 285
 Ile Tyr Ser Leu Arg Asn Lys Asp Val His Val Ser Leu Lys Lys Met
 290 295 300
 Leu Gln Arg Arg Thr Leu Leu
 305 310

<210> 209
 <211> 1003
 <212> DNA
 <213> Homo sapiens

<400> 209
 tgttccaatac attatatttgt cttttgtctg aagcaatgct gaatacaacc tcagtcactg 60
 aattttctcct tttgggagtg acagacattc aagaactgca gccttttctc ttcgttggtt 120
 tccttaccat ctacttcac agtgtggctg ggaatggagc cattctgatg attgtcatct 180
 ctgatcctag actccattcc cctatgtatt tcttcctggg aaacctgtcc tgcctggaca 240
 tctgctactc cagcgtaaca ctgccccaaa tgctgcagaa ctctctctct gcacacaaaag 300
 caatttcttt cttgggatgc ataagccaac tccatttctt ccacttcctg ggcagcacag 360
 aggccatggt gttggccgtg atggcatttg accgctttgt ggctatttgc aagccacttc 420
 gctacactgt cattatgaac cctcagctct gtaccagat ggccatcaca atctggatga 480
 ttgggttttt ccatgccctg ctgcactccc taatgacctc tcgcttgaaac ttctgtggtt 540
 ctaaccgtat ctatcacttc ttctgtgatg tgaagccatt gctaaagctg agccttaatc 600
 agtggctgct cagtactgtc acagggacaa tcgccatggg ccccttcttt ctcacattac 660
 tctcctattt ctacattatc acccatctct tcttcaagac tcattctttt agcatgctcc 720
 gcaaagcact gtccacttgt gcctccact tcatggtagt tattcttttg tatgcacctg 780
 ttctcttcac ctatattcat catgcctcag ggacctccat ggaccaggac cggatcactg 840
 ccatcatgta tactgtggtc actccagtac taaacctcact gatctacact ttgaggaaca 900
 aggaagtga aggggccttt aatagagcaa tgaaaagggt gctttggcct aaagaaatct 960
 tgaagaactc ttctgaagca taaataaaca attaaaaaga tga 1003

<210> 210

<211> 315
 <212> PRT
 <213> Homo sapiens

<400> 210

Met	Leu	Asn	Thr	Thr	Ser	Val	Thr	Glu	Phe	Leu	Leu	Leu	Gly	Val	Thr
1				5					10					15	
Asp	Ile	Gln	Glu	Leu	Gln	Pro	Phe	Leu	Phe	Val	Val	Phe	Leu	Thr	Ile
		20						25					30		
Tyr	Phe	Ile	Ser	Val	Ala	Gly	Asn	Gly	Ala	Ile	Leu	Met	Ile	Val	Ile
		35					40					45			
Ser	Asp	Pro	Arg	Leu	His	Ser	Pro	Met	Tyr	Phe	Phe	Leu	Gly	Asn	Leu
	50					55					60				
Ser	Cys	Leu	Asp	Ile	Cys	Tyr	Ser	Ser	Val	Thr	Leu	Pro	Lys	Met	Leu
	65				70					75					80
Gln	Asn	Phe	Leu	Ser	Ala	His	Lys	Ala	Ile	Ser	Phe	Leu	Gly	Cys	Ile
				85					90					95	
Ser	Gln	Leu	His	Phe	Phe	His	Phe	Leu	Gly	Ser	Thr	Glu	Ala	Met	Leu
			100					105					110		
Leu	Ala	Val	Met	Ala	Phe	Asp	Arg	Phe	Val	Ala	Ile	Cys	Lys	Pro	Leu
		115					120					125			
Arg	Tyr	Thr	Val	Ile	Met	Asn	Pro	Gln	Leu	Cys	Thr	Gln	Met	Ala	Ile
	130					135					140				
Thr	Ile	Trp	Met	Ile	Gly	Phe	Phe	His	Ala	Leu	Leu	His	Ser	Leu	Met
145					150					155					160
Thr	Ser	Arg	Leu	Asn	Phe	Cys	Gly	Ser	Asn	Arg	Ile	Tyr	His	Phe	Phe
				165					170					175	
Cys	Asp	Val	Lys	Pro	Leu	Leu	Lys	Leu	Ser	Leu	Asn	Gln	Trp	Leu	Leu
			180					185					190		
Ser	Thr	Val	Thr	Gly	Thr	Ile	Ala	Met	Gly	Pro	Phe	Phe	Leu	Thr	Leu
		195					200					205			
Leu	Ser	Tyr	Phe	Tyr	Ile	Ile	Thr	His	Leu	Phe	Phe	Lys	Thr	His	Ser
	210					215						220			
Phe	Ser	Met	Leu	Arg	Lys	Ala	Leu	Ser	Thr	Cys	Ala	Ser	His	Phe	Met
225					230					235					240
Val	Val	Ile	Leu	Leu	Tyr	Ala	Pro	Val	Leu	Phe	Thr	Tyr	Ile	His	His
				245					250					255	
Ala	Ser	Gly	Thr	Ser	Met	Asp	Gln	Asp	Arg	Ile	Thr	Ala	Ile	Met	Tyr
			260					265					270		
Thr	Val	Val	Thr	Pro	Val	Leu	Asn	Pro	Leu	Ile	Tyr	Thr	Leu	Arg	Asn

275 280 285

Lys Glu Val Lys Gly Ala Phe Asn Arg Ala Met Lys Arg Trp Leu Trp
290 295 300

Pro Lys Glu Ile Leu Lys Asn Ser Ser Glu Ala
305 310 315

<210> 211
<211> 950
<212> DNA
<213> Homo sapiens

<400> 211
gtaataggaa atgaatgatg atggaaaagt caatgctagc tctgaggggt actttatattt 60
agttggattt tctaattggc cttatctgga agtagttctc tttgtgggta ttttgatctt 120
ctgcttgatg aactgatag gaaacctgtt catcatcatc ctgacgtacc tggactccca 180
tctccatact cccttgatatt tcttcctttc aaatctctca tttctggatc tctgctacac 240
caccagctct atccctcagt tgctgggtcag tctctgggggt gtggaaaaga ccatttctta 300
tgctgggttc atgggttcaac ttactttttt tctcacactg ggaaccacag agtgtgtcct 360
actgggtggg atgtcctatg accgttatgc agctgtgtgt agacctttgc attacactgt 420
cctcatgcac tctcgtttct gccacttggt ggctgtgggt tcttgggtaa gtgggttttac 480
aaaccagca ctcatctcct ccttcacctt ctgggtacct ctgtgtggac accgccaat 540
agatcacttt ttctgtgaag ttccggcact tttaagatta tcatttgtca ataccctga 600
aaataaactg accctcatga tcacaagctc catttttgtt ctgctacttc tcaccctcat 660
tttcaattcc tatggtgcta ttgccaggc tgtactgagg atgcagtcaa ccactgggct 720
tcagaaagta tttggaacat gtggagctca tcatatgggt gtatctctct ttttcattcc 780
ggccatgtgc atgtatctcc agccaccatc aggggaattct caagatcaag gcaagttcat 840
tgctctcttt tatactgttg ttacacctag tcttaaccct ctaatctaca ccctcagaaa 900
caaagatgta agaggggtag tgaagagact aaggggggtgg gagtgagcct 950

<210> 212
<211> 311
<212> PRT
<213> Homo sapiens

<400> 212
Met Asn Asp Asp Gly Lys Val Asn Ala Ser Ser Glu Gly Tyr Phe Ile
1 5 10 15
Leu Val Gly Phe Ser Asn Trp Pro Tyr Leu Glu Val Val Leu Phe Val
20 25 30
Val Ile Leu Ile Phe Cys Leu Met Thr Leu Ile Gly Asn Leu Phe Ile
35 40 45
Ile Ile Leu Thr Tyr Leu Asp Ser His Leu His Thr Pro Leu Tyr Phe
50 55 60
Phe Leu Ser Asn Leu Ser Phe Leu Asp Leu Cys Tyr Thr Thr Ser Ser
65 70 75 80
Ile Pro Gln Leu Leu Val Ser Leu Trp Gly Val Glu Lys Thr Ile Ser
85 90 95

Tyr Ala Gly Cys Met Val Gln Leu Tyr Phe Phe Leu Thr Leu Gly Thr
 100 105 110
 Thr Glu Cys Val Leu Leu Val Val Met Ser Tyr Asp Arg Tyr Ala Ala
 115 120 125
 Val Cys Arg Pro Leu His Tyr Thr Val Leu Met His Ser Arg Phe Cys
 130 135 140
 His Leu Leu Ala Val Ala Ser Trp Val Ser Gly Phe Thr Asn Pro Ala
 145 150 155 160
 Leu His Ser Ser Phe Thr Phe Trp Val Pro Leu Cys Gly His Arg Gln
 165 170 175
 Ile Asp His Phe Phe Cys Glu Val Pro Ala Leu Leu Arg Leu Ser Phe
 180 185 190
 Val Asn Thr Arg Glu Asn Lys Leu Thr Leu Met Ile Thr Ser Ser Ile
 195 200 205
 Phe Val Leu Leu Leu Leu Thr Leu Ile Phe Thr Ser Tyr Gly Ala Ile
 210 215 220
 Ala Gln Ala Val Leu Arg Met Gln Ser Thr Thr Gly Leu Gln Lys Val
 225 230 235 240
 Phe Gly Thr Cys Gly Ala His His Met Val Val Ser Leu Phe Phe Ile
 245 250 255
 Pro Ala Met Cys Met Tyr Leu Gln Pro Pro Ser Gly Asn Ser Gln Asp
 260 265 270
 Gln Gly Lys Phe Ile Ala Leu Phe Tyr Thr Val Val Thr Pro Ser Leu
 275 280 285
 Asn Pro Leu Ile Tyr Thr Leu Arg Asn Lys Asp Val Arg Gly Val Val
 290 295 300
 Lys Arg Leu Arg Gly Trp Glu
 305 310

<210> 213

<211> 967

<212> DNA

<213> Homo sapiens

<400> 213

gcatttgccc cagtagctat gattataatt tgcaatgaca gccacagtga tttcatcctt 60
 ctgggcttct ctaacaagcc acatttggag aagatacttt tttggatcat ttttattttt 120
 tattttttga ctcttgacagg aaatatgggtc atagtctctg tgtccttgaa ggatccaaaa 180
 ctccacatcc ctatgtattt ctttctttcc aacctttcct tggtagacct ctgtttgacc 240
 agcagctgtg ttccacagat gttgattaac ttctggggcc cagaaaagac catcagctac 300
 attggctgtg ccattcaact ctatgttttt ttgtggcttg gggccacgga atatgtcctt 360
 cttgttgtca tggctgtgga ttgttatgta gcagtgtgtc atccactgca aaataccatg 420
 atcatgcacc caaaactttg tctgcagctg gctatcttgg catggggggac tggcttggcc 480

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cagtctctga tccagtcgcc tgccaccctc cggttaccct tctgctccca gcggtatggtg 540
gatgatgttg tttgtgaagt cccagctctg attcagctct ccagtactga tactacctac 600
agtgaaattc agatgtctat cgccagtgtt gtcctcctgg tgatgccctt gatcattatc 660
ctttcctctt ctggtgctat tgctaaggct gtgctgagaa ttaagtcaac tgcaggacag 720
aagaaagcat ttggcacctg catctctcac cttcttgtgg tttctctctt ttatggcact 780
gtcacagggtg tctaccttca accaaaaaat cactatcctc atgaatgggg caaatttctc 840
actcttttct aactgtagt aaccccaact cttaatcccc tcatctacac tctaaggaac 900
aaggaggtaa agggagcact aataagattg gggaggagga cctgggattc ccagaataac 960
taacaag                                         967

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<210> 214
 <211> 314
 <212> PRT
 <213> Homo sapiens

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<400> 214
Met Ile Ile Ile Cys Asn Asp Ser His Ser Asp Phe Ile Leu Leu Gly
  1             5             10             15

Phe Ser Asn Lys Pro His Leu Glu Lys Ile Leu Phe Trp Ile Ile Phe
      20             25             30

Ile Phe Tyr Phe Leu Thr Leu Ala Gly Asn Met Val Ile Val Leu Val
      35             40             45

Ser Leu Lys Asp Pro Lys Leu His Ile Pro Met Tyr Phe Phe Leu Ser
      50             55             60

Asn Leu Ser Leu Val Asp Leu Cys Leu Thr Ser Ser Cys Val Pro Gln
      65             70             75             80

Met Leu Ile Asn Phe Trp Gly Pro Glu Lys Thr Ile Ser Tyr Ile Gly
      85             90             95

Cys Ala Ile Gln Leu Tyr Val Phe Leu Trp Leu Gly Ala Thr Glu Tyr
      100            105            110

Val Leu Leu Val Val Met Ala Val Asp Cys Tyr Val Ala Val Cys His
      115            120            125

Pro Leu Gln Asn Thr Met Ile Met His Pro Lys Leu Cys Leu Gln Leu
      130            135            140

Ala Ile Leu Ala Trp Gly Thr Gly Leu Ala Gln Ser Leu Ile Gln Ser
      145            150            155            160

Pro Ala Thr Leu Arg Leu Pro Phe Cys Ser Gln Arg Met Val Asp Asp
      165            170            175

Val Val Cys Glu Val Pro Ala Leu Ile Gln Leu Ser Ser Thr Asp Thr
      180            185            190

Thr Tyr Ser Glu Ile Gln Met Ser Ile Ala Ser Val Val Leu Leu Val
      195            200            205

Met Pro Leu Ile Ile Ile Leu Ser Ser Ser Gly Ala Ile Ala Lys Ala

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210	215	220
Val Leu Arg Ile Lys Ser Thr Ala Gly Gln Lys Lys Ala Phe Gly Thr		
225	230	235 240
Cys Ile Ser His Leu Leu Val Val Ser Leu Phe Tyr Gly Thr Val Thr		
	245	250 255
Gly Val Tyr Leu Gln Pro Lys Asn His Tyr Pro His Glu Trp Gly Lys		
	260	265 270
Phe Leu Thr Leu Phe Tyr Thr Val Val Thr Pro Thr Leu Asn Pro Leu		
	275	280 285
Ile Tyr Thr Leu Arg Asn Lys Glu Val Lys Gly Ala Leu Ile Arg Leu		
	290	295 300
Gly Arg Arg Thr Trp Asp Ser Gln Asn Asn		
305	310	

<210> 215
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:
 oligonucleotide primer

<400> 215
 gaaggtttcc ctgggcgttc ctt 23

<210> 216
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:
 oligonucleotide primer

<400> 216
 gtgaggtgca ggcaaaacca atgatt 26

<210> 217
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:
 oligonucleotide primer

<400> 217

gacccaaga gccttaatga ctctaga 27

<210> 218

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
oligonucleotide primer

<400> 218

ctgtccgctcg tccttcagag tcat 24

<210> 219

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
oligonucleotide primer

<400> 219

caaccaagag gcaagagg 18

<210> 220

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
oligonucleotide primer

<400> 220

ctccatgaga ctcagtgaat aaga 24

<210> 221

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
oligonucleotide primer

<400> 221

ctgccttctg ccttatgcca 20

<210> 222

<211> 27

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:
 oligonucleotide primer

 <400> 222
 ttaagttcta gggtagatgt gcacaac 27

 <210> 223
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:
 oligonucleotide primer

 <400> 223
 gcctgggcct gctgactg 18

 <210> 224
 <211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:
 oligonucleotide primer

 <400> 224
 ccgcatcagc ctaggggtac tagagat 27

 <210> 225
 <211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:
 oligonucleotide primer

 <400> 225
 ctgtgcactg ttggtgggaa tataaaa 27

 <210> 226
 <211> 28
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:

oligonucleotide primer

<400> 226
tctggtggtt aagataaaac acaagtca 28

<210> 227
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
oligonucleotide primer

<400> 227
ttcggctgct gctgaccat 19

<210> 228
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
oligonucleotide primer

<400> 228
cctggtagcc tcaaagcttc ttagttc 27

<210> 229
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
oligonucleotide primer

<400> 229
atggctgccg agaactcctc ctc 23

<210> 230
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
oligonucleotide primer

<400> 230
tcaagaaaaag cttattctgg aaaaggttct cttc 34

<210> 231
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:
 oligonucleotide primer

 <400> 231
 aaccctgct gtcaccttc tc 22

 <210> 232
 <211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:
 oligonucleotide primer

 <400> 232
 gctacaaaag gtttctttct gatctgc 27

 <210> 233
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:
 oligonucleotide primer

 <400> 233
 gtaaacattt ggccagcttg gtttg 25

 <210> 234
 <211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:
 oligonucleotide primer

 <400> 234
 cagctgcctg gctaactcct ataacac 27

 <210> 235
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:
 oligonucleotide primer

 <400> 235
 aaggtgctga aatagcaatg acaagag 27

 <210> 236
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:
 oligonucleotide primer

 <400> 236
 cagagtctct ccctagctcc ccag 24

 <210> 237
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:
 oligonucleotide primer

 <400> 237
 atacccccacg ttccgctatg agatt 25

 <210> 238
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:
 oligonucleotide primer

 <400> 238
 gtgtcacgtc gagtggttgg tg 22

 <210> 239
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:
 oligonucleotide primer

<p><400> 239 cacatagtct tggctccagt ttcgt</p>	25
<p><210> 240 <211> 34 <212> DNA <213> Artificial Sequence</p> <p><220> <223> Description of Artificial Sequence: oligonucleotide primer</p>	
<p><400> 240 ctaaagtttt attccaatca gtgttttttt ttcc</p>	34
<p><210> 241 <211> 22 <212> DNA <213> Artificial Sequence</p> <p><220> <223> Description of Artificial Sequence: oligonucleotide primer</p>	
<p><400> 241 gaatgatgcc cttttgccac aa</p>	22
<p><210> 242 <211> 34 <212> DNA <213> Artificial Sequence</p> <p><220> <223> Description of Artificial Sequence: oligonucleotide primer</p>	
<p><400> 242 ctatgaactc aattccaaaa ataatttaca cctg</p>	34
<p><210> 243 <211> 21 <212> DNA <213> Artificial Sequence</p> <p><220> <223> Description of Artificial Sequence: oligonucleotide primer</p>	
<p><400> 243 cctttttgtgg gttccatagt c</p>	21
<p><210> 244</p>	

<211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:
 oligonucleotide primer

 <400> 244
 tttgtcccca agggccttcc agt 23

 <210> 245
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:
 oligonucleotide primer

 <400> 245
 aaaagcaggt attcaacaag ca 22

 <210> 246
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:
 oligonucleotide primer

 <400> 246
 gacaacaaac aagcaaacac aa 22

 <210> 247
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:
 oligonucleotide primer

 <400> 247
 accttcact tccttctggt cctgct 26

 <210> 248
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>

<223> Description of Artificial Sequence:
oligonucleotide primer

<400> 248
gcaggagagg aggaagaaga g 21

<210> 249
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
oligonucleotide primer

<400> 249
gaggaggtgg aagaagatga tt 22

<210> 250
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
oligonucleotide primer

<400> 250
agaatctctt ccgcaagatc ctggct 26

<210> 251
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
oligonucleotide primer

<400> 251
catccaata tggagagtca aa 22

<210> 252
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
oligonucleotide primer

<400> 252
acctttctat gaggaggtgg aa 22

<210> 253
 <211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:
 oligonucleotide primer

 <400> 253
 tgagaacccat gataagaatc tcttccg 27

 <210> 254
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:
 oligonucleotide primer

 <400> 254
 gtcaccagcc aggatcttg 19

 <210> 255
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:
 oligonucleotide primer

 <400> 255
 agacgtcaaa cagggaatc tt 22

 <210> 256
 <211> 29
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:
 oligonucleotide primer

 <400> 256
 cctccaggat ataagatcac tctgattga 29

 <210> 257
 <211> 21
 <212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
oligonucleotide primer

<400> 257
tctgtagggtt cctcccatga g 21

<210> 258
<211> 29
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
oligonucleotide primer

<400> 258
tccaggatat aagatcactc tgattgata 29

<210> 259
<211> 35
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
oligonucleotide primer

<400> 259
aggttcctcc catgagatat tcaataacaa gtcct 35

<210> 260
<211> 26
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
oligonucleotide primer

<400> 260
aacgtttcct agtatagggtg catctg 26

<210> 261
<211> 28
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
oligonucleotide primer

<p><400> 261 tcagtgtatc aattgccata atttcttt</p>	28
<p><210> 262 <211> 32 <212> DNA <213> Artificial Sequence</p>	
<p><220> <223> Description of Artificial Sequence: oligonucleotide primer</p>	
<p><400> 262 tttgctccaa atcttagtcc aaatccaatg aa</p>	32
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<210> 573
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<223> Description of Artificial Sequence: oligonucleotide primer	
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cagatgaaga gaggtcacac acacg	25
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 <223> Description of Artificial Sequence:
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 <210> 622
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 <400> 622
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 <210> 623
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 oligonucleotide primer

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oligonucleotide primer

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oligonucleotide primer

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oligonucleotide primer

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oligonucleotide primer

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oligonucleotide primer

<400> 629
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<210> 630
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 oligonucleotide primer

 <400> 630
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 <210> 631
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 oligonucleotide primer

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 <210> 632
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 <210> 633
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 <210> 635
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<211> 25
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 oligonucleotide primer

 <400> 643
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 <210> 644
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 <400> 644
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 <210> 645
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 <400> 645
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 <210> 646
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 oligonucleotide primer

 <400> 646
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 <210> 647
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<223> Description of Artificial Sequence:
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<400> 647
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<210> 648
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<400> 648
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<210> 649
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 oligonucleotide primer

<400> 649
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<210> 650
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<220>
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<400> 650
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<210> 651
 <211> 33
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<220>
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<400> 651
 ctcgagtccc ccggtctggt ctcgcaggag gcg 33

<210> 652
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
oligonucleotide primer

<400> 652
aaaaaccagc ctgtcaacta ctccttctc

29

<210> 653
<211> 24
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<220>
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oligonucleotide primer

<400> 653
acttcatgta tcccttgcag tggc

24